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ABSTRACT

Vocational education and technical training (VETT) in Palestine were examined from the perspective of gender planning and gender integration. First, a literature review and semistructured interviews with key VETT personnel were conducted to determine the extent to which gender institutionalization in VETT is implemented in four spheres: political, organizational, technical, and research. Next, questionnaires were distributed to a sample of 854 grade 12 students in rural and urban public schools in the northern, central, and southern regions of Palestine's West Bank. VETT in Palestine was determined to be inefficient and not relevant to the needs of its target group or to the needs of the market. At the political and organizational levels, VETT proved institutionally fragmented and incapable of serving its stated purposes. VETT was found to be gender insensitive and to perpetuate gender bias. Students' knowledge of VETT's provisions and opportunities was very limited and derived primarily from informal sources. It was concluded that Palestine's education system predetermines and restricts future opportunities for males and females alike. Residents of the southern region were deprived of many privileges and resources enjoyed in central and northern Palestine. (Sixty-nine tables/figures are included, and 17 tables are appended. Contains 38 references.) (MN)

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September 1996

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Gender Planning and Vocational Education and Technical Training (VETT) in Palestine

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September 1996

ABSTRACT

This study was conducted to examine Vocational Education and Technical Training (VETT) in Palestine from the perspective of gender planning and gender integration. It is an attempt to find out how responsive the system of VETT is to its potential beneficiaries with a focus on its role in shaping gender perceptions and perpetuating or changing existing gender roles and patterns. Like all other Palestinian institutions and systems, VETT has been undergoing transition. Before August 1994, when the Palestine National Authority (PNA) Ministry of Education and Higher Education took control over the education system, VETT was controlled by several bodies: the Israeli occupation authorities, the Jordanian Ministry of Education, the UNRWA, and the private sector. The current study was conducted during this transitional phase when PNA policy makers were engaged in assessing the status of VETT and identifying its priorities. Thus this study is an attempt to yield gender aware research that can contribute to improved policy formulation and planning, as well as the eventual development of a more equitable VETT system.

The study falls into two parts: Part I looks at the system of VETT in Palestine from a gender perspective taking the gender planning and gender integration approach. It is an attempt to see to what extent gender institutionalization is implemented in four spheres : the political sphere, the organizational sphere, the technical sphere and the research sphere. The discussion and analysis are based on secondary sources as well as on semi-structured interviews with key personnel in VETT. Part II focuses on the technical sphere taking a student-centered approach. It specifically examines the knowledge, attitudes, perceptions and expectations of a potential VETT target group, 854 12th graders in the public schools. It attempts to uncover how the family and the education system affect and possibly determine students' life and future opportunities, and to what extent the opportunities available to these students are in line with existing gender roles and gender patterns. The discussion and analysis were based on the findings from a set of questionnaires, distributed to 854 twelfth graders in public schools in urban and rural areas of three different regions in the West Bank- the north, the center and the south.

The findings in Part I indicate that VETT in Palestine is neither efficient nor relevant to the needs of its target group or the needs of the market. On the political and organizational levels, VETT is institutionally fragmented and incapable of serving its stated purposes. Not only is it gender insensitive, but it also perpetuates gender bias. For the most part, research on VETT is not gender informed; a few studies and policy documents recognize its gender inequity, but when recommendations and policies for reform are formulated, they do not adequately consider gender. Review of literature on VETT also showed that VETT institutions often do not go in line with their stated policies, where a clear dissociation between policies and stated objectives and practices are noted.

The findings in Part II reveal that

1. students' knowledge of VETT's provisions and opportunities is very limited and basically derived from informal private sources. The knowledge, attitudes and perceptions of students coincide with existing gender roles and gender practices. Family and education structures reinforce the dichotomy between private and public worlds: females are channelled to the private world, where their role is limited to reproduction and caretaking; males are channelled to the public world, where their role is defined to be production and breadwinning. Having internalized social norms and values, male and female students confine themselves to these spaces: females show less awareness of available opportunities and perceive narrower education and employment opportunities.
2. Through streaming, the education system predetermines and restricts future opportunities for both males and females alike. Students in the arts stream, those usually perceived by the system to be academically and intellectually inferior to students in science, are more ghettoized: they show poorer academic achievement and a lower level of motivation; they have more restricted knowledge of VETT and fewer education and employment opportunities than students in the science stream.
3. Regional differences showed that the south is deprived of privileges that the north and the center enjoy. Due to mal-distribution of wealth and resources, most institutions, donor funds and national activities are concentrated in the center; as a result of the recent political changes, the south has become physically dissociated from the center and the north.

Relating the findings of the two parts of the study, we conclude that the system of VETT in Palestine does not adequately function to meet the needs and expectations of its target group or help them promote positive attitudes towards its current provisions. As it currently stands, it is unable to change their expectations and perceptions. On the educational level VETT is not considered higher education; it is not perceived as a useful type of education that would give students good work opportunities or social prestige; and it is seen as an institution providing educational opportunities for students with poor achievement and performance. Students' knowledge of VETT provisions and their attitudes towards the fields of specialization it provides reveal conventional perceptions of gender roles and gender relations. Thus, rather than opening up new opportunities and roles for male and female students, VETT simply reproduces gender dichotomies and gender hierarchies present in the family, the education system and other social institutions. In addition, VETT in Palestine is not compatible with modern day life and market conditions and needs, and thus, it is currently inadequate for economic and social development.

To reform Palestinian VETT and make it able to contribute to economic and social development, we see that the most urgent step forward is to conduct VETT systems and market analysis with the perspective of economic development and human resource development that integrates gender and that is relevant to today's needs, and with a clear

perception of where Palestine fits within the international world order. A second, but equally important, issue is to design policies that would take into consideration streaming (arts and science streams), region and gender; effective reform polices that would yield improved VETT output ought to take into consideration inequity, and the new role of women in society and their integration into social and economic development.

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Introduction

With the launching of the peace process at the Madrid Conference in 1991, Palestinians entered a new political era. According to the Oslo Peace Accords, the Palestinian National Authority (PNA) would start functioning following the return of the PLO to the Gaza Strip and the Jericho area concurrent with the withdrawal of the Israeli occupation authorities from those areas. In August 1994, the PNA took over certain sectors like health, education, and social welfare. Since then, Palestinians have set out to restructure and build their institutions; the international community, on the other hand, has been interested in promoting the peace process hoping to make headway towards a settlement in the Middle East. The efforts of the two sides, though from different perspectives, are focused on the development of human resources, a substantial and legitimate basis for the development of any developing or new country. For the Palestinians, a real settlement is contingent on their ability to plan for and achieve comprehensive and sustainable development of Palestinian society. However, as has become apparent, in line with the terms of the Oslo Peace Accords, Palestinians do not have full control over their resources or their economy, which is expected to hinder planning, institutional building and policy formulation, and ultimately make it hard to define the nature of the future Palestinian state.

The transfer of control of the education sector in the West Bank and Gaza Strip from the Israeli authorities to the PNA generated unprecedented local and international attention on the formulation of educational development policies and strategies. The principal priorities identified by the Palestinians include infrastructure building, institutional development, curriculum reform, and improvement of the quality of services and service delivery. While there is clarity on these four general areas, there is far more ambiguity and discord, on behalf of policy makers and planners in education and in VETT, over the specific programs to be developed and implemented. This is in large part due to the difficulties in assessing and prioritizing needs because of lack of research , especially gender-aware research and market needs and systems analysis research, and because of lack of data regarding knowledge, attitudes, perceptions and practices of students *vis-à-vis* personal development in general and education in particular.

The fact that Palestinian society is basically a young society means that education, and VETT in particular, should be among the main concerns of policy makers and development planners. VETT is defined here as vocational education and technical training offered to school dropouts, post-preparatory students, post-secondary students and workers and employers to upgrade their skills and qualifications to make them capable of meeting the challenges of building a state and the challenges of modern life. The past two years have witnessed efforts on behalf of international agencies and local institutions to investigate the system of VETT. These recent studies and earlier available literature on VETT report similar findings: Palestinian VETT is an inefficient, ineffective and irrelevant system. A few suggest plans for reforming it and promoting its role. A review of the

literature on VETT revealed that although on the whole gender discrepancies are recognized, proposals for developing VETT do not account for this gap and do not consider it a serious problem that requires an urgent solution. VETT is seen as inequitable, but the nature of inequity is not specified, nor the reasons underlying it uncovered. [1]

Having to deal with a youthful society with about half of its population falling within the age range of 4 to 14 years old[2], it is natural for Palestinian, and other involved, policy makers and development planners to focus on preparing the youth to be actively and effectively involved in the country's economy. Due to the importance of vocational education and technical training (VETT) in providing access to employment, it is seen as a solution to the problem of youth. Almost three decades of Israeli occupation of Palestine has had a serious impact on the structures of Palestinian society. The FAFO study on Palestinian society refers to the structural impact that the Israeli occupation authorities have inflicted on the life of Palestinians, stating that,

> Israeli political control has affected the daily life of Palestinians in several ways, most importantly, perhaps, through the restrictions on the movement and forcible changes in the housing situations of families...and at the community and national levels, it prevents systematic planning for the future.[3]

Constant weakening of the agricultural sector, lack of control over the labor market and total dependence of all productive sectors on the Israeli economy have all worked in the interest of serving the Israeli market and the Israeli economy. The traditional nature of Palestinian society, combined with the absence of a national authority, have contributed to the underdevelopment of Palestinian society and economy. Israeli policy, be it in education, health, or labor, has served Israeli interests while Palestinian development initiatives have been unable to promote the development of Palestinian capacities, but have been concerned with the social survival of Palestinians and their struggle to resist Israeli occupation. As a result of the dispersion of decision making among the Israeli authorities, the Jordanian authorities, the UNRWA, the NGO's and the private sector, and thus the disparity of perspective and interests, Palestinian society remained unevenly developed and distorted, lacking a firm infrastructure.

The general underdevelopment of Palestinian society has manifested itself in weak institutions and structures in general and produced an acute state of gender disparity in particular. The FAFO survey defined three components of the labor force: the "employed", the "unemployed" and those "outside the labor force". It shows a minimal participation of women in the labor force; however, it cautions that this should not imply that women are not productive. It states:

> On the contrary, the results of women's use of time shows that women, on average, spend 60 hours a week on housework and income generating activities. The majority of women are thus "occupied" more than full-time with productive and reproductive activities.[4]

The low participation of women in the formal labor sector is mainly caused by Israeli control over labor markets. For instance, the construction sector, a totally male-oriented sector, was developed at the expense of other labor sectors as it was the most needed sector by the Israeli market. Thus when there was a high demand for construction labor, women were left unemployed.

The economic structure imposed on the Palestinians, especially in terms of job opportunities and in terms of defining the size and qualifications of the labor force, has indirectly affected the education of men and women. Since 1948, Palestinians have invested significantly in the education of their children to make up for the loss of their land and to give their children an avenue to social mobility. However, research shows that, for both economic and cultural reasons, the education of males is given priority over that of females in the family.[5] In addition, job opportunities have been defined mainly by the Israeli market and have been restricted by Israeli political policies; therefore, job opportunities have been made more available for men than for women. Since women get lower pay than men and their mobility is more constrained, families prefer to invest in the education of males to get a better output. It is widely believed, and socially practiced, that once women get married, their families will no longer have access to or control over their salaries while men remain the source of family continuity and economic support. In the FAFO study, Hammami reports that women's access to and control over resources is delimited by the status of the husband or the family; thus the majority are considered economically dependent, limiting their chances to be part of decision making.[6]

The conditions outlined above gave rise to the study undertaken here. The study, which falls into two parts, is an inquiry into VETT in Palestine from a gender planning and gender integration perspective. It is intended to inform the current debate on education reform policies and strategies in secondary and post-secondary education. Part I examines all VETT programs, including those for dropouts, for post-preparatory and post-secondary (or community college) students adopting a gender planning and gender integration perspective. Gender disparities in VETT, as illustrated in the literature and research reviewed here, are manifested in female enrollment rates lower than male rates, and in female students concentrated in fields traditionally perceived as appropriate for women. These fields, such as teaching, child education, nursing, and secretarial work, which are accessible to women, do not contradict with their role as wives, mothers, daughters or sisters, and cannot sustain them as economically independent entities. Although in theory all fields are open to female students, in practice, non-traditional avenues are rarely explored. Among the concerns raised are the quality of students entering vocational training and the reasons underlying the system's weaknesses. Unmotivated achievers, low enrollment rates, poor facilities and institutional management, outdated curricula, a gap between stated policy and implementation, and lack of career guidance are some of the major issues requiring attention in VETT policy making, planning and programming.

Part II is an empirical study exploring a number of important issues regarding knowledge, attitudes, perceptions and practices of potential VETT students in Palestine, with an emphasis on gender differences. It explores these issues through an implementation

of a structured set of questionnaires. It specifically looks at the academic status of public school 12th graders, their knowledge and awareness of available opportunities, and in particular of those offered by VETT, their attitudes, perceptions, and practices regarding future life opportunities, focusing on their gender roles and relations and on how they themselves perceive such roles and relations.

Thus, this two-part study attempts to find out how the system of VETT in Palestine is responding to the needs of its potential target population. It explores the relation between the political-organizational sphere and the technical sphere; that is, to what extent this relation reflects gender-awareness and shows coordination and harmony among the different elements of the spheres. It also explores what gender implications VETT has for secondary education, such as reinforcing the gendered socialization that students undergo in the family and at school, or breaking down existing gender dichotomies.

Notes

1 In a recent paper (July 1995) titled "Palestinian Technical and Vocational Training: Current Situation, Problems, and Reform Proposals", M. Tull gives a comprehensive review of the most recent research done on VETT in the last 5 years, and he summarizes both national and international attempts at solving major problems of VETT. These do not include any developed plan to solve the question of the low participation of women in VETT.

2 Hassan Abu Libdeh et. al. "Population Characteristics and Trends," *Palestinian Society in Gaza, West Bank, and Arab Jerusalem: A Survey of Living Conditions.* Oslo: FAFO, 1994, p. 47.

3 *Palestinian Society in Gaza, West Bank, and Arab Jerusalem: Summary of a Survey of Living Conditions,* Oslo: FAFO, 1994, pp. 5-6.

4 *ibid.*, pp. 16-17.

5 Marianne Heiberg. "Education" *The Palestinian Society in the West Bank and the Gaza Strip: A Survey of the Living Conditions,* Oslo: FAFO, 1994, p. 131.

6 Rema Hammami, in Heiberg, *op.cit.*, p. 349.

Part I : A Gender Analysis of the System

This part of the study is based on a review of available literature and policy oriented reports on Vocational Education and Technical Training (VETT) in Palestine from a gender planning perspective. Discussions and analysis are also based on interviews and meetings with educators in the field, as well as on the outcome of a roundtable discussion organized by the Women's Studies Program at Birzeit University, in which representatives of the PNA Ministry of Education and the Ministry of Labor in charge of vocational training and education and technical training in their respective ministries, as well as experts in the field, participated. The discussion focused on Mazen Hashweh's paper "Towards an Efficient, Effective, and Relevant National Training System in Palestine", (1995) and an overview of VETT in terms of what it is offering to both men and women.[1] To put this discussion and analysis in context, a brief description of the historical development of VETT in Palestine is presented below. It is to be noted here that the role and involvement of the PNA in VETT was not focused on in the discussion and analysis of the system here, as it had not been in full control of the Palestinian institutions at the time of the study.

I. Historical Development of VETT in Palestine

VETT in Palestine was initiated by charitable institutions targeting disadvantaged groups like the needy, orphans and children of martyrs.[2] Their main targets were families, represented by the males as the breadwinners, with the aim to assist these breadwinners to acquire skills to enable them to find jobs and earn a living. A welfare approach, with an emphasis on poverty alleviation and improving the economic conditions of households, is what underlies social and gender diversities in the structure and development of VETT. Between 1860 and 1952 seven industrial schools and vocational centers were established targeting poor and orphan males only. Maswada and A. A. Al-Kek's state the rationale underlying the establishment of every vocational training center (VTC) and industrial and vocational school they describe. Nine of the twelve industrial schools and the few post-secondary VTCs operating currently in Palestine were established by Christian missionaries or Islamic Societies[3]. Among these schools are the Schneller Orphanage School in Jerusalem (1860) the Celesian Brothers Industrial School (1863), Dar Al-Aytam Al-Islamiyyah ("The Islamic Orphanage", 1922), Al-Yatim Al-Arabi ("The Arab Orphan", 1945), Al-Amal School ("The School of Hope"), first established by the Mennonites in 1961 and now run by the Arab Society. Except for Al-Amal School, which is co-educational vocational, all of these schools are exclusively for males; their names are indicative of the welfare approach they adopt.

A. UNRWA's Contribution

In the aftermath of 1948, UNRWA (the United Nations Relief and Works Agency) started its involvement in education and vocational training to cater to the Palestine refugees. Although UNRWA was established to serve a somewhat different target group, the Palestine refugees, it seemed to have taken a similar welfare approach, targeting the household in general as represented by the male breadwinner. Its main goal is to provide basic education and basic skills to the refugees to help them survive. On the level of basic education, UNRWA served males and females equally by establishing elementary and preparatory schools. On the level of VETT, it provided more training opportunities for males than for females. UNRWA started training in three fields: " 'vocational training' which includes post-preparatory vocational trade courses... post-secondary community college level semi-professional training... and pre-service and in-service training."[4]

UNRWA VETT provisions reflect not only class bias, targeting the poor refugees, but also gender bias. Gender disparity and perception of gender roles are reflected in the number of VTCs and the number and type of training fields, which mostly targeted males and provided conventionally training areas for women. Between 1953 and 1962 UNRWA launched three VTCs and one teacher training center; only one was opened, in the Ramallah area, for females; it offered teacher training and training in sewing / dressmaking, secretarial work and beauty care. The other three centers were for males offering a variety of trade courses and teacher training. UNRWA also launched a poverty alleviation program which targeted the most needy refugees, the main target being the household represented by the male breadwinner. Its report on vocational training and job creation states that

> The primary target is the special hardship families themselves. Even though the traditional male breadwinner may be unable to compete for employment in the open market, he himself and other members of the family have or can be taught the necessary skills to run a small family enterprise or be employed in a group scheme.[5]

B. The Jordanian Ministry of Education [6]

When the Jordanian government took custody over the West Bank in the early 50's, it integrated the schooling system into the Jordanian Ministry of Education.[7] The approach it followed complied with the Jordanian education policy which, in terms of gender, favored boys over girls and thus reflected its perceptions of gender division of labor. Vocational education and training was introduced at two levels, the secondary and post-secondary. In the early 1950's, teacher training programs were introduced in the Ramallah Teacher Training Center for Women in 1952 and Khadoury Institute for men in Tulkarem which was originally established in 1930 for agricultural training. Between 1960 and 1962 two preparatory schools in Jerusalem and Nablus were transformed into industrial secondary schools, exclusively for males; in 1964, Al-Arroub Agricultural School for

boys was established in Hebron. These schools and colleges followed the Jordanian policy and philosophy of education. The marginalization of women in vocational education and training is clear.

C. Israeli Occupation

Following the 1967 Israeli occupation of the West Bank, East Jerusalem and the Gaza Strip, the Israeli authorities had full control over all resources, economic sectors, and lives of Palestinians. To serve their market, they opened 13 VTCs, nine in the West Bank and four in the Gaza Strip [8] with males being their major target group. These centers offered a number of training courses lasting between 5 and 11 months. As de Moura Castro observed, "the original intention of these courses was to prepare workers for the Israeli market and to focus on relatively simple occupations, mostly in the construction sector."[9] In 1976, the Israeli Civil Administration founded the School for Registered Nurses in Gaza to train health workers for the health centers it operates. The school admits both males and females and is based in a building annexed to Al-Nasr Hospital in Gaza city. One of the requirements for admission to this school states that the student "must be committed to work for double the period of study [i.e. six years] in health centers run by the government."[10]

In 1976 and 1978, the Israeli authorities upgraded two preparatory schools to secondary industrial schools for males, to answer a labor market need in targeted geographical areas, Ramallah and Tulkarem.[11] For similar reasons, in 1992 and 1993, industrial schools for men were established in Seelat-Al-Thaher and in Hebron. Throughout the past three decades, however, the Israeli Civil Administration has not provided any kind of agricultural training in the West Bank or Gaza Strip. On the contrary, agricultural training institutions were either closed or practically phased out. An UNRWA report states that the Beit Hanoun Agricultural School in the Gaza Strip, established in 1956, was closed twice; the first closure followed the Israeli occupation of Gaza in 1956 and lasted until 1958; the second closure came following the 1967 Israeli occupation of the West Bank and the Gaza Strip. [12] On the other hand, the agricultural sections of both institutions, Al-Arroub and Khadoury in the West Bank, were practically phased out keeping only the academic specialization, which were solely teacher training programs.[13]

In addition to the public sector, the private (or non-governmental) sector had its share of involvement in VETT. In the past fifteen years private institutions and NGOs have initiated an additional number of training centers. The 70's and 80's, for instance, witnessed the rise of eight community colleges, five of which are privately owned and three run by the Islamic Awqaf. During the same period, specialized training at the university level started in the Engineering Faculty at both Birzeit and Al-Najah universities. In the last ten years a number of NGO centers started adult training; Hashweh reports that there are around 30 local and foreign institutions that offer adult training in agriculture and economic development.[14] In addition to that, Birzeit and Hebron Universities established centers for continuing adult education for the purpose of training and upgrading of skills.

II. Objectives of the study

The purpose of this study is to examine VETT in Palestine from a gender planning perspective. The approach argues that "gender is an issue in all policies, programs and projects in the sense that they are formulated to meet the needs of 'people', 'communities', 'target groups', or 'households'."[15] From this perspective, the analysis presented here involves four separate but interrelated spheres: the political, the organizational, the technical, and the research spheres in an attempt to investigate if gender is an integral part of the competence of planners, organizers and providers of VETT.[16] To state it briefly, the study tries to answer two questions: first, in addition to its problems in being inefficient, ineffective and irrelevant, is VETT in Palestine sufficiently equitable to contribute to the development of Palestinian society? Second, where does the responsibility for gender equity and integration in the system of VETT lie, if it exists at all and do the four spheres of VETT operate in coordination and harmony? It is suggested here that if gender is not considered a cross-cutting issue integrated in the four above-mentioned spheres and if these spheres do not operate in an "orchestrated" manner, it will be unlikely for VETT to be equitable either in social or in gender terms.

III. Analytical Approach: Gender Planning

A. Gender Diagnosis

The low rate of women participating in vocational education and training in Palestine cannot be overlooked even when we undertake a hasty review of the system. To arrive at an initial understanding of the reasons, a "gender diagnosis"[17] of VETT is needed. This approach does not focus on women as a social group or community isolated from the rest of the society. Instead, it uses gender as a main unit of analysis and carries out a disaggregation of the groups under consideration, looking at the gender roles and gender relations of both men and women within a certain context in a particular community. Carolyn Moser has identified three gender roles, the reproductive, the productive and the community managing roles, which women play in accordance with the gender division of labor in their community.[18] In many societies, most women play these three roles, while men infrequently do certain domestic chores but are mainly involved in productive work. Caren Levy added a fourth role, the "constituency-based politics"[19] role which is normally considered paid work associated with prestige or status, and which, traditionally, has been performed by men.

Applying gender diagnosis, a few questions are relevant: What roles do men and women involved in VETT have? Do they have similar or different roles? Who has access to and control over the resources, such as property, income, training, and jobs ? If they have different roles and different access to and control over resources, then they must have different basic and strategic gender needs.[20] What are these needs? Are they being

met? What policy approaches and development policies are adopted in the planning and implementation of VETT policies or programs? Do they target men and women on a welfare basis or do they aim at contributing to the development of society and its human resources? With these questions in mind, the current VETT system in Palestine is examined in relation to the interaction of the four spheres: the political sphere, the organizational sphere, the technical sphere and the research sphere as defined below.

B. Institutionalization of Gender

Caren Levy proposes the four spheres as the major components of the "web" of institutionalization of gender, with gender being a cross-cutting issue. These four spheres can be the components of one institution or of several linked institutions. In this paper, they form the components of the institution of education and of VETT in particular. At the heart of the political sphere lie men and women who through their experience interpret their own reality and identify their needs. They form political pressure groups and elect their representatives who commit themselves to represent their needs in the organizational sphere. Major actors in the organizational sphere are policy makers who are in charge of designing policies and allocating adequate resources and setting up proper procedures in order to implement these policies. Allocation of resources allows political constituencies and representatives of political structures to represent men's and women's interests and needs and thus fulfill their own political commitments. In addition, men's and women's roles and experiences are closely linked to the technical sphere which is mainly responsible for program and project delivery.

Project and program providers plan to implement the policy designed at the political level and are under the direct control of the political sphere. They may be supported by the staff if the policy designed ensures staff development and well -developed methodology. Finally, men's and women's experiences and their interpretation of their own reality form a basic core for the research sphere which can uncover their needs and interests; its findings can be used to improve program and project delivery. The reverse may also be true; research on program and project delivery can be informative to men and women and raise their awareness. Research also contributes to building a solid theory which feeds into methodology, which in turn helps improve staff development and delivery of services.

C. Gender Integration

The institutionalization of gender assists gender planning which proposes that for any project or intervention to contribute to social and gender equity, these four interrelated spheres should work in an "orchestrated" manner with gender being integrated in them at all levels. If policy makers design gender-aware policies but do not ensure that services are delivered with gender awareness or do not allocate the necessary resources, their attempt will result in a discrepancy between rhetoric and implementation. If gendered research was not consulted by policy makers or program providers, it will be difficult for

any intervention to bring about development or transformation in the society. For political constituencies and structures to fulfill their commitment and exert pressure on policy makers and program providers, they should be aware of the gender interests and needs of men and women. Thus the location of responsibility towards gender is an integral part of each component of the four spheres, and not the responsibility of one party.

This model of analysis is applied to the system of VETT in Palestine to investigate to what extent the four spheres interact and interrelate. This would help us understand the dispersal in decision making and the fragmentation which VETT currently suffers, and would provide guidelines for future planning and sustainable development. Applying this model would also uncover to what extent the research sphere provides information about gender disparities and gender needs of the beneficiaries and whether the program providers are aware of these disparities and, if so, to what extent their awareness is reflected in the program implementation to meet such needs. The findings of the analysis would contribute to paving the way for gender integration and gender planning of future VETT.

IV. Characteristics of VETT

An examination of VETT uncovers a series of problems regarding its size, student caliber, fragmentation, program provisions and most significant of all, its gender disparity and class bias. The fact that vocational education has occupied a second rank position in comparison with academic education for several decades goes back to the days of the Greek philosophers who made a sharp division between manual work and intellectual work. In many cases, it has not been treated as having a value of its own capable of contributing to the socio-economic development of societies, but "in particular it has affirmed a particular, and politically charged, image of work and of the relationship between schooling and work."[21] Thus, on the whole, VETT has been used as a band-aid solution to social, economic and political problems arising in times of tension, crisis and/or transitional phases.

The historical development of VETT in Palestine, outlined above, indicates that it started as a palliative solution to social and political problems through missionary schools, charitable societies, and UNRWA centers. It then developed to conform to the political and economic policies of the Israeli Civil Administration or to respond to the goals of the Palestinian private sector and NGOs. In general, it has served a small student population, mostly male, and marginalized women. It has not attracted a good caliber of students or trainees. Its student body is minuscule in size and of much lower quality when compared to the size and quality of students in regular schools or universities. About 3% of the total student population amounting to 56,064 enroll in vocational training; of this 3% only 14.7% are females.[22]

A. Target Group Attraction

VETT student cohort is largely composed of low achievers and unmotivated students, mainly coming from poor socio-economic background; these students are attracted by the rather flexible admission policies and the relatively low fees students have to pay. All UNRWA vocational training centers (VTCs), for instance, are free of charge but require applicants to hold a refugee card; applicants stand a better chance to be admitted if none of their family members is being or was educated at UNRWA VETT institutions. The applicants' age should be less than 22, and their geographical background is of major significance. All these requirements are given priority over the applicant's interest or academic achievement.[23] To this effect, L. Alami states, " In the regulations governing admission to vocational training institutions... in the majority of cases, the interest of the students, their capabilities as well as their potential for growth are practically disregarded."[24]

In a study conducted on female students' interest in vocational and academic training at the Ramallah Women's Training Center (RWTC), the tables comparing the students' interests to their current specialization show that most students were not interested in what they were studying. The highest rate of conformity between interest and specialization is about 50% representing students in secretarial training (51.72%) and laboratory analysis (50%). The rates representing students' interests in teacher training are more pessimistic; the highest rate of conformity between interest and specialization, (44%), is in elementary teacher training. [25]

The same kind of problem regarding gender bias and the quality and interest of the enrollees exists in the post-preparatory vocational schools found in the school system. There are 14 vocational schools and centers, of which only one is for females and another is co-educational. Students streamed into these schools are also unmotivated and low achievers. Following Jordanian educational policy, students are directed into the science stream, the arts stream or the vocational stream at the end of 10th grade. Those students obtaining a C average or higher in science subjects are allowed to enter the science stream;[26] those with the lowest scores go to vocational schools. The Israeli Civil Administration (CIVAD) VTCs[27], on the other hand, admit school dropouts to most training courses if they are over 16 years old regardless of their academic background; the applicant's grade is considered only in some professions (e.g. radio and TV maintenance) and in cases of long waiting lists.[28] Private VTCs have to follow Jordanian rules and regulations for admission; students should hold the school leaving certificate, the *Tawjihi*, and have an average of 60 or above. However, since students pay relatively high fees, their admission to these centers is not contingent on their achievement as long as they hold the Tawjihi certificate.[29]

B. Fragmentation and Dispersal

A second major characteristic of the Palestine VETT system, if it may be called a system,

is fragmentation. VETT has been operated by several bodies, each having its own policy and philosophy that direct its functions without any systematic and regular coordination. In fact, there seems to be a general consensus that, for several decades, VETT lacked a central body to supervise it, to plan for it or to carry out a unified policy. Fluitman states, "The vocational education and training system of the occupied territories is small and fragmented, with some notable exceptions, of rather low quality...It is undirected and underfunded."[30]

Training provisions at all levels of VETT, for instance, show that vocational programs provided are male-oriented, offering limited types of training. The majority of these programs, which consist of a duplication of specialization, produce semi-skilled labor; community colleges provide a good example of the fragmentation of VETT in Palestine. Currently, there are 17-20 community colleges in the West Bank and Gaza Strip which are run by UNRWA, the Israeli Civil Administration and the Jordanian government (recently, they have been handed over to the PNA), and the private sector. What these colleges have in common is their flexible admission system and graduation regulations: to be admitted to a community college, an applicant must hold the Tawjihi; to be granted the diploma, the student must pass a standardized comprehensive exam required by the Jordanian system. However, these community colleges differ from each other in all other respects, such as curricula, training methodology, qualifications and development of teachers and trainers, facilities provided, funding and student fees.

In brief, VETT suffers from an endless list of problems that are outlined in the available studies and research and which cannot be discussed here in detail. However, it is worth noting that, in the process of suggesting a national training system, Hashweh reviewed both sides of VETT in Palestine, the formal and the informal. He summarizes VETT characteristics in five main points: it is small in size; it does not offer enough fields of specialization; it does not produce skilled labor; it is not related to industry; and it shows a very low participation rate of women. [31] Thus in its attempts to reform VETT, the PNA will have to face serious challenges – fragmentation of the system, lack of credibility and the low status it occupies, and most important its gender and class bias. Although, as stated earlier, this study has not focused on the role and involvement of the PNA in VETT, as at the time of writing control and administration of Palestinian institutions had just been transferred to the PNA. However, a few remarks ought to be mentioned at this point before giving a gender analysis of the four spheres of VETT.

Up to the time of writing, the PNA had not had full control of all Palestinian institutions. Ministries had been recently formed and assigned responsibilities. Responsibilities for VETT reform and development had been delegated to three ministries – Education and Higher Education, Labor, and Social Affairs. This division of labor and roles among the three ministries seems to reflect both gender bias and class bias. The responsibilities were distributed as follows: at the post-secondary level, or at the community college level, responsibility for VETT was delegated to the Ministry of Education and Higher Education, hoping that it would succeed in changing its image from low status education to valuable higher education. VETT targeting groups at any

level (the post-preparatory level or post-secondary level) had become the responsibility of the Ministry of Labor. The Ministry would be in charge of targeting groups to be trained to meet the needs of the labor market; its role would be to train unemployed and/or upgrade their skills to assist them gain access to employment. Thus it had been given charge of all the CIVAD training centers. Finally, the Ministry of Social Affairs had taken charge of providing VETT programs for a special target group, males and females coming from poor families receiving social welfare.

V. Gender Analysis of VETT: The Four Spheres

A. The Technical Sphere: Gender Equity Or Gender Disparity

> The technical sphere is concerned with the making and implementing of plans, programmes and projects, and the extent to which they meet the gender needs of men and women affected by or involved in them.[12]

In light of this definition, what does VETT in Palestine provide for men and women in terms of their roles, and their access to and control over resources? What kind of needs does it meet to provide its graduates with access to employment opportunities? An examination of the number and distribution of the VTCs and the kind of training they provide shows that VETT in Palestine is inequitable and ineffective. Vocational and industrial schools are mainly for boys; training provisions available for dropouts are basically for men with women's participation kept to a minimum. Semi-professional and technical training provided for high school graduates does not seem to meet the needs of either men or women, but is particularly inadequate for women. As for employment, VETT prepares women mainly for work that is traditionally approved of as women's work. The range of professions women occupy as graduates of VETT is, on average, in the extended domain of their reproductive role. In theory what is available and accessible to men, in community colleges for example, is also available and accessible to women, but practice seems to reflect a different reality, revealing the prevalence of serious gender discrepancies in roles and power relations.

1. VETT Provisions

Comparing VTCs in the Gaza Strip and the West Bank including East Jerusalem, we find that the Gaza Strip is disadvantaged both in quantity and in variety of VETT provisions. Table 1 below shows the distribution of VTCs in the Gaza Strip, the West Bank and East Jerusalem.

Whereas there are 46 institutions offering training at different levels in the West Bank and East Jerusalem, there are only 14 in the Gaza Strip; there are no vocational or industrial schools, and the only agricultural school, located in Beit Hanoun, was closed twice and remained so until recently. The Gaza Strip has two teacher training centers, one

Table 1. Distribution of VTCs by levels and geographical location.[33]

Type of VTC	*Gaza Strip*	*West Bank*
Post-Preparatory Industrial Schools	0	10
Post-Preparatory "Commercial" Schools	0	2
Post-Preparatory Agricultural Schools	1	1
Post-Preparatory CIVAD VTCs	4	9
Post-Secondary Health Schools	4	4
Post- Preparatory UN & other	2	5
Post-Secondary Community Colleges	3	15
Total	14	46

for women and one for men, which were originally one co-educational center. Two other VTCs are the UNRWA VTC, which offers both trade courses and technical training, and the VTC run by the Near East Council for Churches.

Access to training is supposed to give access to jobs. Women's access to vocational education and training is minimal both in quantity and variety in comparison with what is available to men; as a result, their job opportunities are fewer and more limited. As shown in section III above, unlike male low achievers, women have marginal access to vocational education at the post-preparatory level. Of the 14 vocational, industrial and agricultural schools,[34] only two offer training for women, with courses in sewing and commerce; all others are male schools offering training that has been conventionally confined to men. These schools provide training in 29 areas producing labor mainly for the construction and services sectors. These areas include car mechanics, carpentry, general electricity, blacksmithing and welding, aluminum works, and construction. The challenge the PNA is to take up here, since it is currently involved in reform and policy formulation, is to design policy that is capable of giving males and females equal access to VETT training provisions, both in theory and in practice.

Post-Preparatory and Dropout Training Opportunities

On the level of training available to dropouts, a review of the kinds of courses and enrollment figures indicate inefficiency and gender inequity. Training opportunities for men at this level are limited mainly to construction and public services; women's access to available training is even narrower. Enrollment figures in the post-preparatory level VTCs for the year 1993/1994 show a total of 3268 students and school dropouts of whom only 14.7% are female trainees. Except for the Palestinian Institute for Vocational Training (PIVT), a private VTC founded in 1992, all the other VTCs are exclusively for males. The PIVT offers four training fields to both men and women, these include office management, office secretary, advertising, and shoe design.

The Israeli Civil Administration ran 13 VTCs, nine in the West Bank and four in the Gaza Strip. Hashweh (1995) lists 27 different courses offered at these centers giving

Table 2. Distribution of students by Gender and field of specialization in PIVT.[35]

Field of Specialization	*Male Enrollment*	*Female enrollment*
Office Secretary	18	2
Office Management	20	0
Printed and TV Ads	16	4
Shoe Design	17	3
Total	71	9

Table 3. Distribution of trainees by Gender and field of specialization at CIVAD VTCs.

CIVAD- Fields	*Male Enrollment*	*Female Enrollment*
Hebrew Language	40 in 1 VTC	20 in 1 VTC
Hairdressing	30 in 1 VTC	84 in 3 VTCs
Sewing	0	228 in 9 VTCs
Industrial Drawing	41 in 4 VTC	6 in 1 VTC
Typing / Accounting / Computers	59 in 2 VTCs	135 in 4 VTCs
Total 4	170	473

training in areas including construction, masonry, auto-repair, carpentry, general electricity, blacksmithing and welding; other areas include garage licensing, driver instruction, industrial drawing, mechanics for managers and sewing. The majority of these courses are offered to male dropouts while women's enrollment is close to minimal: Of the 27 training courses, only 5 target women; these are sewing, hairdressing, typing and accounting, Hebrew language, and industrial drawing, as shown in table 3 below. The female enrollment rate is highest in sewing, 228 females compared to 7 males, and lowest in industrial drawing, 6 females compared to 41 males.[36] A look at the enrollment figures in the PIVT for the same year, given in Table 3 show that women constitute 11.2%, that is, nine females of a total of 80 trainees.

This indicates that opening training courses for women does not necessarily make them accessible. Several factors obstruct women's enrollment in such training courses such as lack of career guidance, high fees, social attitudes and others. The phenomenon of access versus enrollment is more evident in the training programs provided by the community colleges. The factors widening the gap between access and enrollment will be referred to in Part II of the study; however, a thorough investigation of the matter ought to be researched in the future.

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Post-Secondary Training Provisions

Community colleges offer vocational and technical training at the post-secondary level. In all of these colleges and schools, training accessible to women is restricted to areas which are considered an extension of their reproductive role, namely the organization and care of the household, or in areas which prepare them to get jobs in the fields traditionally defined for them. Such areas include teacher training, pre-school teacher training, nursing, sewing, hairdressing, home economics and house management, nutrition, physiotherapy, interior decoration, etc. There are 17 community colleges, two are in the Gaza Strip and 15 in the West Bank. Six are exclusively for males, three for females and eight are co-educational.[37]

Community colleges provide 47 fields of training, fourteen of which are teacher training programs; the rest are technical and semi-professional training programs. The only female training courses are 7 in total offering training courses in dressmaking and laboratory analysis in addition to other areas of a nature similar to those mentioned above. According to the statistics collected by Maswada and Al- Kek in 1990[38], the total enrollment in community colleges in the West Bank and the Gaza Strip for the year 1987 was 6757, of which women formed around 48%[39] distributed as follows: about 64% (i.e. 2010) of their total enrollment was concentrated in teacher training programs, 15% were enrolled in administrative and financial professions, namely business administration (108) and secretary and office management (212) and the remaining 23% was distributed over semi-professional and technical programs. At first glance, this distribution may be understood as the outcome of the provisions open and available for women. However, an examination of enrollment figures in training programs reveals that such an interpretation is only partly valid.

For almost three decades, most community colleges offered a high dosage of teacher training programs for historical reasons. Except for UNRWA centers and the Polytechnic in Hebron, community colleges were originally teacher training centers. Following a shift in Jordanian educational regulations in 1985 they were all transformed into community colleges shifting their focus to semi-professional and technical training, in addition to teacher training. The Jordanian Ministry of Education declared that graduates of teacher training centers should upgrade their academic qualifications since by the year 1997 they will not be eligible for employment in schools. Thus until the late 1980's the majority of training programs most accessible to women were teacher training programs. But what about other training programs open to them? What do enrollment figures tell us? Examining enrollment numbers of male and female trainees and students in co-educational Community Colleges, we notice that women have high enrollment in trades and vocations that are traditionally sanctioned for women, while their participation in training courses such as mechanical or electronic engineering is either low or non-existent. Table 4 below shows a discrepancy in women's and men's enrollment in the co-educational colleges.

For instance, women form 12% of student enrollment in the Polytechnic, 22.5% in Al-Asriyah Community College and 77.5% in Al-Ummah College. These enrollment figures may be explained with reference to the available areas of specialization. The

Table 4. Distribution of students by Gender in co-ed community colleges.

	Enrollment by Numbers and Percentages				
Community College	*Male #*	*Male %*	*Female #*	*Female %*	*Total*
Polytechnic College	840	88%	111	12%	951
Islamic Studies College	33	29%	161	71.%	225
Al-Najah National College	211	35%	391	65%	602
Al-Ibrahimiyah College	323	50.5%	219	49.5%	451
Al-Ummah College	88	22.5%	304	77.5%	392
Bethlehem College	9	60	6	40%	15
Al-Asriyah College	481	77.5%	140	22.5%	621
Al-Rawdah College	176	39%	445	61%	621
Total 8	2073	54%	1777	46%	3840

Source: Data presented here is based on statistics taken from Maswada and Al-Kek, 1990.

Polytechnic offers 12 specific training courses in engineering, computer skills, fine arts and ceramics, and agricultural mechanics. Female enrollment rates in these fields are as follows: 44% in computers, 28% in ceramics, 21% in interior decoration, and 7% in surveying. Al-Ummah College offers training courses in teacher training, computer programming, secretarial work and accounting. Women' s enrollment rate in teacher training is 72.3% of the total number of students; it is 27.7% in the other fields. In comparison, Al-Asriyah College has a teacher training, technical training and semi-professional training in engineering, the para-medical professions, and business. The highest enrollment of women in this college is 94% located in the teacher training programs; there is no female enrollment in law, media, health inspection and hotel management. It should be indicated that most community colleges have a teacher training sector, including training in elementary education, recently transformed into Child Education, in which women form a high majority; out of 612 male and female students, women constitute 75%.

Low participation of women in courses open for both men and women might imply that women are not interested in exploring new areas, or that they feel they are unable to cope with such fields of specialization. However, opening non-conventional paths for women does not necessarily mean that they have access to these paths. Several factors seem to be at play; social attitudes and relation to employment opportunities are only two. Such questions are still to be explored; however, a few instances may be mentioned here which can offer some tentative answers. In an interview with the UNRWA Chief Education Officer, L. Alami, she stated that in several cases the father has come to the VTC and decided on the kind of training his daughter should have. Being present at a few colleges during registration and admission, I observed ten cases of women applicants, five of whom were accompanied by a parent or a brother or a husband who spoke for them; three women were not even present.

Another incident happened during a meeting with Mr. Abdallah Afana, the Assistant Director General of VETT at the Ministry of Education and Higher Education; the meeting was interrupted by a woman who wanted to apply for her daughter to attend a community college in Jordan. She said, "Please help me. If you leave it to me, I cannot afford to pay for her education. I have boys studying at the University. Her uncle volunteered to pay for her expenses. She will live with him and will join this college which is next door to his house." In response to the kind of field the young woman was interested in, the mother answered, " She wants to study nursing but we want to apply for assistant pharmacist. It is the only available field at the college." In the majority of cases, as shown earlier, female students at the UNRWA the Ramallah Women's Training Center (RWTC) are enrolled in fields incompatible with their interests. Such attitudes indicate that women do not practically have access to training courses, even though these courses are theoretically open to them. Also, they may have access to training but they may not have control over where to be trained or in what to be trained.

2. VETT And Employment Opportunities

Restrictions on access to VETT provisions are a major source of the constraints women face in employment opportunities. A comprehensive understanding of the role of VETT in providing equal opportunities for men and women cannot be reached unless we investigate their access to employment. It was shown earlier that employment chances for both men and women are restricted by political and economic measures inflicted by the Israeli occupation, by political and economic crisis in the region, and by the absence of systematic national planning. However, apart from such constraints, an investigation of employment rates and the labor market segregation reflects gender disparity caused by the traditional gender division of labor and gender role perception.

To examine the relation between education, training and employment, the relevant FAFO data[40] collected from interviews with 319 (100 females and 219 males) randomly selected individuals were analyzed for the purpose of this study. Although the numbers are relatively small, they indicate gender differences in relation to education and employment. The subjects were asked about the highest level of education they had achieved and the work they were doing for the last year at the time of the survey.

Figures presented in Table 5 and Table 6 below show that irrespective of the level of education, women are concentrated in jobs in the public services sector while men are distributed over a range of employment sectors. Out of 100 women 60 work in public services and 30 in jobs other than those specified by the survey. The level of education of these women ranges from attaining basic education (*kuttab*, or religious schools, and primary education) to holding a University degree. On the other hand, as displayed in Table 6, out of 219 men 101 completed basic education and 14 obtained a University degree. One quarter of the men worked in construction; their level of education ranges from no education to holding university degrees. Twenty percent of the men worked in public services, seven of whom only hold a university degree.

One may conclude that women may have access to education, but their employment

Table 5. Distribution of female subjects by highest level of education attained and type of work

Type of work	*Highest Type of Education*					Total
	Basic	*Secondary*	*Post-Secondary*	*University Degree*	*No Such Education*	
Construction	0	0	0	0	0	0
Industry	1	0	0	0	0	1
Commerce	3	2	0	0	0	5
Public Services	9	10	31	10	0	60
Farming / Fishing	4	0	0	0	0	4
Transportation	0	0	0	0	0	0
Others	19	4	5	2	0	30
Total	36	16	36	12	0	100

Table 6. Distribution of male subjects by highest type of education attained and type of work

Type of work	*Highest Type of Education*					Total
	Basic	*Secondary*	*Post-Secondary*	*University Degree*	*No Such Education*	
Construction	28	19	7	2	1	57
Industry	17	13	3	0	1	34
Commerce	10	8	0	4	0	22
Public Services	14	11	11	7	4	47
Farming / Fishing	14	14	1	0	2	31
Transportation	8	5	0	0	1	14
Others	10	1	2	1	0	14
Total	101	71	24	14	9	219

opportunities are limited in variety which reflects the concept that male wage-earners ought to be given priorities in employment, and that the types of jobs females occupy are traditionally sanctioned. These findings reveal that, in general, women predominate in public services sectors, although in this sample they were underrepresented as the data were randomly collected. Predominance of women in these sectors indicates two points which will also be discussed in Part II of this study. First, in the formal labor force women predominate the public services sector; to gain access to employment in this sector, they need to attain a certain level of education, not lower than the *Tawjihi* or community college education. Second, women's predominance in this sector reflects their readiness and willingness to take jobs of high professional status from the perspective of society, jobs that indicate conformity with the gendered perception of women's role in society. Women are perceived as not responsible for earning the family's living, but if they have to get a job when the need arises, or if they choose to work outside the house,

their access to employment is confined to the type of jobs conventionally approved of as "female" jobs or as jobs of a certain professional status, such as teachers, child educators, caretakers, doctors or pharmacists and assistant pharmacists.

A clearer picture of education and employment opportunities, showing a pattern of gender division of labor, is reflected in the distribution of employees at VETT institutions. Maswada and Al-Kek give the following distribution of community colleges employees according to gender and academic qualifications. The figures displayed in Tables 7 and 8 below show that among employees there are fewer women than men, and these women have low academic qualifications.

Table 7. Distribution of employees at the community colleges by level of education, positions and Gender

Level of	*Administrators*		*Faculty*		*TOTAL*		*Percentage*
Education	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*of Women*
Ph.D.	0	4	2	20	2	24	7.5%
MA	1	16	11	110	12	126	9.4%
High Diploma	0	5	1	20	1	25	4%
BA	18	77	68	287	86	386	19%
Post-Secondary	38	48	18	64	56	112	34%
High School	13	42	4	0	17	42	30%
Basic Education	6	6	2	0	8	6	57%
Total	76	198	106	501	182	699	25%

The highest ratio of women (19%) holding a degree in higher education is at the BA level; these women mainly occupying teaching positions. In administration, there are 18 women with a BA and about 51 women out of 227 administrators who have completed secondary or post-secondary courses. The jobs these women have are either administrators at women's colleges or as secretaries in different colleges. Statistics provided in Maswada and Al-Kek show that there are 32 women administrators in two women colleges in Ramallah and that women form a majority among faculty (64%) and administrative staff (82%) only in the two women's colleges; in co-ed colleges, however, they are a small minority constituting around 9% among teachers and 22.8% among administrative staff. In men's colleges women's presence among the teaching faculty is negligible. They hold less than 4% of the teaching positions, but occupy about 23% of the administrative posts. On the other hand, the rate of men's employment is higher in all types of colleges. One does not find one women's college where men do not occupy teaching or administrative posts. They constitute about 35% of the teaching faculty and 18% of the administrative staff.

A major difference between men and women in *only* men's and *only* women's colleges is that women hold office and secretarial positions while men are usually in decision-making positions. In al-Najah Community College and the Polytechnic, for instance, the

Dean and the Programs Coordinators and Directors are all males. In Ramallah Women's Training Center (RWTC), three out of seven program coordinators are males. In Kalandia, there are only three females, two secretaries and one in services.[41] One last observation is that men are at an advantage even in the services sector in all types of colleges, forming 77.5% of the services positions at women's colleges. This again indicates gender bias and gendered role perception: women are perceived as biological reproducers and family caretakers, and not producers; they may have access to teaching jobs, but they are less likely to gain access to administrative or decision-making posts.

What does such disaggregation tell us?

Low participation of both men and women in VETT programs in comparison with academic programs indicates that VETT is not very attractive to youth. In general, it does not meet their needs of employment or social mobility. Regarding both education and employment opportunities, priority is apparently given to men. The analysis outlined above shows that men have more access to education at all levels and have more access to employment. Available statistical data is insufficient to arrive at the source of the problem. A few questions remain unanswered. For instance, do men, and women in particular, have the freedom to choose the college or field of study? Do the fees influence their choice? Do they know which skills are marketable? Do they know if they would be or would not be employed after completing their training? Are they aware of VETT provisions? Do women have sufficient information about the existence of fields other than teaching and secretarial work? Are they instructed that they have limited abilities and chances, or that they will not be employed after graduation, or that marriage is their sole future chance? Would they be denied admission to new fields? Although these specific questions should be raised and answered, a major source of the inefficiency and inequity in VETT provisions lies in the political, organizational and research spheres analyzed in the sections below.

B. The Political Sphere

The political sphere is composed of all the social and political structures involved in making decisions; gender analysis and planning is concerned with how decisions are made and whether decision making represents men's and women's interests and concerns.[42] Historical and political developments in Palestine resulted in placing the responsibility for VETT policy and formal decision-making on four bodies; the first is the public sector represented by the Jordanian government and subsequently by the Israeli Civil Administration Labor and Education departments.[43] The other three bodies are the UNRWA Department of Education, the private sector, and the NGOs. To this end, we can say that the policies set for VETT over the past decades have not and could not have taken into consideration the interests and needs of Palestinian men and women and the development of society as a whole because planning and decision-making processes and structures were dispersed and the participation of the Palestinians themselves in this sphere was marginal. These various, sometimes contradictory, macro policies resulted in a small and

fragmented system which did not render VETT useful for employment or able to serve the sustainable development of Palestinian society or upgrade and expand the labor force.

The implications underlying VETT policy show that VETT has partly served the purpose of adaptation only, rather than transformation of labor roles and relations. If we compare the intentions of policy makers with the goals achieved through their provisions, we find that, on the whole, their main concern is not to serve the development of Palestinian society, and they do not show any kind of gender awareness. Men are identified as the main breadwinners and as the main component of the labor force; as such men are targeted for training. Women, in contrast, are seen as taking mainly a traditional reproductive role and as playing a minimal role in production.

1. Israeli Occupation: Responding to Demands of the Israeli Labor Market

The Israeli Civil Administration was concerned with short-term informal training in order to supply the Israeli market with cheap Palestinian labor. Israeli short-term training that is regulated by the demand in the Israeli market has had serious negative effects on the Palestinian economic system and the composition of the labor force. The Israeli policy of confiscation of land and exploitation of Palestinian water resources throughout three decades of occupation has completely marginalized the agriculture sector, a major sector of the Palestinian economy. In addition it has driven labor out of agriculture, created semi-skilled labor for temporary employment, affected wages and limited women's training and employment opportunities. Subsequently, the kind of VETT provided by the Israeli Department of Labor varied with the demands of the Israeli market. Construction and services for men and sewing for women were the main domain of the Israeli VETT provisions. For instance, there were at least 6 centers in the West Bank offering five-month training courses for men in construction and masonry in comparison with only one 14-18 months training course in radio and TV maintenance. Nine centers provided five-month courses in sewing for women.

Thus, fluctuation in the demands in the Israeli market led to fluctuation in labor force participation, mostly affecting women. The absence of a social support system, structural power relations which exclude women from entrepreneurship, and training mainly in sewing, are all factors that confined women to work at home. They are thus part of the informal economy and are left at the mercy of middlemen with very low wages, unprotected by any kind of social support. In brief this policy has not provided training to give Palestinians access to employment or to promote their economic growth. In a study on VETT, Caranoy states:

> The problem of equitable and efficient VET policies is complex. On the one hand, VET policies...are able to promote economic growth by extending existing skills and by introducing new ones to the labour market... At the same time, government can use VET to distribute the fruits of such growth more equitably through the kinds of VET in which it invests. On the other hand, for VET policies to achieve these goals means fitting them closely to the labour market- specifically to the

growth of jobs available, to the quality of those jobs in terms of wages paid and the security they provide, to the nature of private training in those jobs, and to the distribution of educational resources in general.[4]

2. UNRWA Policy: Welfare or Development?

The policy guiding VETT provisions offered by UNRWA for over three decades has been informed by a welfare approach, targeting needy refugees; their basic policy line is to equip youth with skills to be able to earn a living and provide basic needs for their families. Throughout their involvement in VETT for Palestine refugees in the West Bank, the Gaza Strip and other Arab neighboring countries, UNRWA's concern has been "... to meet the demands of the labor market, especially the labor market in the Middle East."[45] For over three decades, UNRWA VETT provided the Palestinians with training, mainly in teaching and other trades to give them access to job opportunities in the Gulf and in other Arab countries. However, linking VETT to the demands of the labor market in the Middle East has made Palestinian access to employment resources subject to changes in the political situation in such an unsettled region. The Gulf War, for instance, closed employment opportunities in the face of Palestinian labor and left thousands of Palestinians, mostly women, unemployed. UNRWA reports that integrating women is a keystone of its policy. For instance, it reserves 56% of the teacher-training seats and 22% of the technical training seats for women.[46]

Although UNRWA's policy has served women giving them access to teaching jobs, in the long run, confining women to the teaching field made them suffer more seriously than men in times of political crisis. A UN report states that "... the current post-Gulf Crisis labor market negatively affects Palestinian women as well as men, particularly in occupations such as school teachers in which UNRWA female graduates for decades found employment opportunities in Kuwait, Saudi Arabia, and other Gulf states." [47] However, unemployment in UNRWA's perception, as in others', remains to be regarded as primarily a male problem; women, generally are not considered unemployed even when they are heads of households, i.e. the only breadwinners in the family, and most probably they do not get included in official data on labor, especially data on the informal sector.

UNRWA has continuously evaluated its programs in terms of the labor market demands and according to regional and global political and economic changes. In UNRWA's 1992 document, "Human Resource Development", reports are given on the measures taken to fight against the disadvantages of women. The initial policy was to target both men and women to be able to support their families; girls were encouraged to get basic education and to join literacy courses; while boys were encouraged to attend "trade courses leading to employment, girls were taught skills for domestic production."[48] For this purpose 59 centers were established in 1951 offering training in sewing, needle work and childcare. This program continued for 35 years, though with a focus on sewing. However, global and national political and economic changes led UNRWA to make a shift in its direction, as it claimed. To this end an UNRWA report states:

> Change came with the *intifadah* with its attendant awareness of the potential and needs of women... with the explosion of concern for the role of women in development, prompted by the United Nations Decade for Women...[49]

Accordingly, UNRWA states that it redefined its goals following a "developmental social welfare" approach rather than providing relief services. Women's programs were claimed to be mainstreamed in the services program rather than being left as marginal. In targeting disadvantaged women, UNRWA's practice does not seem to fully realize its stated policy. In some sense, UNRWA is ahead of other institutions in that it is meeting women's practical gender needs; however, its practices do not target women's strategic gender needs.

The stated goals for women's programs was to give women access to skills and employment, to assist them in dealing with their "family and social problems, and to develop their role in the communities." [50] This focus does not conform with the statement made regarding the change in approach. UNRWA launched activities which are claiming to bring the women participating in these programs into the decision-making circle; women choose the courses, find the trainer and negotiate the cost. Through these centers, UNRWA meets the women's "practical gender" needs, such as providing nurseries or pre-school facilities at the center and providing them with take-home hot meals. The courses offered, however, are confined to areas like industrial-machine knitting, sewing, food preservation, and computer skills. Though their stated policy implies that they are aware of the triple role of women and the importance of their involvement in development, the training courses offered reveal otherwise. UNRWA's real conceptualization of women's role is in biological reproduction and caretaking, while their productive role is, in fact, an extension of their reproductive role, such as child-education, teaching, and nursing; the real target is the family and not the women themselves.

3. NGOs: Nationalism and Development

Although a thorough study of NGO policies is not within the domain of this study, we can refer to the broad policy that has guided their operations and their VETT provisions. Initially, NGOs were guided by national commitment towards the practical needs of the poor, orphans and children of martyrs. Following the 1948 Arab-Israeli war, several charitable societies were established. In 1948, the Arab Women's Union started its services for the needy in several parts of the West Bank. Following the 1967 war, In'ash Al-Usra Society ("Family Relief Society") started giving services to the children and families of martyrs in order to preserve the Palestinian family and help it survive through difficult political and socio-economic conditions.

In the 1980's, particularly at the outset of the *Intifadah*, NGO operations responded to the *Intifadah* slogans: development should serve the goals of the national struggle and the steadfastness of Palestinians under occupation. Thus cooperatives, income generating projects and popular teaching were main concerns in order to implement slogans like going back to the land and boycotting Israeli products and the Israeli labor market.

In the absence of a Palestinian state, several grass-root and development organizations took up the community managing role providing public services in the areas of health, agriculture, and informal education and training. For example, the Union of Palestinian Medical Relief Committees trains village health workers, the Women's Studies Center and Bisan Center offer non-conventional training and upgrading of skills for empowerment and capacity building purposes, MAAN Center offers training in permaculture; through its women's development program, it organizes non-traditional training courses in home gardening, management skills and home maintenance and environmental issues. However, to be fair in evaluating NGO policies and their impact on the lives of men and women served by NGO programs in comparison with formal VETT, an in-depth study of their policies and provisions is needed.

The discussion above showed that the philosophy underlying VETT provisions of all three sectors, the public sector- Jordanian government, the Israeli occupation authorities and UNRWA- the private sector and NGO's was the same. Although their various provisions looked different, they reflected gender disparities and traditional gender role perception. However, unlike UNRWA or the Jordanian Ministry of Education, NGO's have been guided by a pro-nationalist ideology, which underlies their provisions, perceiving women taking mainly a reproductive and caretaking role. Women are expected to serve the goals of the national movement and the liberation of Palestine. Therefore, they are provided with services that would enable them to bear children and sustain the survival of the family. Only recently, some NGO's have started to provide few training services which target women and fulfill some of their needs for employment and development.

C. The Organizational Sphere

The small-sized and fragmented system of VETT outlined in the technical sphere is the output of its inter and intra-organizational structures which are responsible for planning and implementation. Gender analysis is concerned with investigating whether such structures operate in a gender-aware way.[51] As mentioned earlier, VETT in Palestine has been operated by four separate bodies all of which run similar formal training programs at the level of community colleges. At the intra-organizational level, these bodies barely have any links or common ground although they are officially governed by similar rules and guidelines. At the inter-organizational level policy and organizational matters are concentrated in the hands of a handful of people.

1. Inter-organizational Structure

Fragmentation of VETT in Palestine has had its impact on Palestinian society in general and Palestinian women in particular; in brief, it has not helped the development of society nor has it been sufficiently gender-aware. At the top of the hierarchical structure has been the Israeli authorities since 1967 controlling the existence and the development of community colleges and government training centers. Next in the hierarchy comes the Jordanian and the Egyptian governments, represented by their Ministries of Education.

Until the PNA took over education in August 1994, Palestinian schools and community colleges in the West Bank and Gaza Strip were subject to rules and regulations governing the Jordanian and the Egyptian education systems respectively, with ultimate control in the hands of the Israeli Civil Administration. UNRWA as a VETT provider occupies a unique status: it is limited by the general guidelines of the Israeli authorities and by the rules and regulations of the Jordanian Ministry of Education. However, it is directly responsible to its Education Department placed in Jordan which is directed by UNRWA's Headquarters in Vienna.

Israeli Occupation Authorities as Decision-Makers

As occupying forces, Israeli policy does not target human resource development that could in the long run contribute to the development of Palestinian society; neither is it expected to find gender integration in the competence of their policy makers. Being at the top of the hierarchy of the organizational structure, they have controlled all formal decision-making regarding financing, structure, and staffing of all governmental educational institutions. Until August 1994, they were in full control of all educational institutions including the six public colleges in the West Bank and the Gaza Strip. The training programs in these colleges were mainly teacher training programs which were never adapted to meet the needs of the market or recent technological and economic developments. They were underfunded and the majority of their premises were rundown.

Under the Israeli occupation, the establishment of any new VETT institution, the launching of new programs and the everyday operation of VETT have been subject to decisions made by the Israeli authorities. No community college has been allowed to operate if it did not have a license authorized by the Israeli authorities; the license has to be annually renewed and it may be terminated any time if the college administration does not abide by the terms of Israeli Military Order 854, an order issued to enforce security measures rather than academic or administrative matters. Recently, the siege of Jerusalem has had a major impact on enrollment in the different community colleges located in the vicinity of Jerusalem and in the southern part of the West Bank. According to the director of Al-Ibrahimiyyah College in Jerusalem, due to the closure of Jerusalem, their student enrollment dropped from over 600 to about 240 students; ninety percent of their applicants for the year 1995-1996 were females from the suburbs of Jerusalem. This has led them to close down some of their training programs.

Given that the Israeli main focus has been on producing semi-skilled labor, mainly for the services and construction sectors in the Israeli market, Israeli authorities have transformed four academic schools into vocational and industrial schools. While, on the other hand, agricultural training is needed in an agricultural area like the West Bank, the Israeli Civil Administration did not offer any training courses in agriculture and in the 1970's they practically phased out the agricultural section of Al-Arroub and Khadoury. Such decisions were made in accordance with the general policy of the Israeli authorities concerned with keeping the occupied territories economically dependent through halting the development of agriculture and not allowing industry to grow.[52]

Jordanian Ministry of Education[53]

The actual involvement of the Jordanian Ministry of Education was between 1950 and 1967 when Jordan had custody over the West Bank. The Ministry was then in charge of establishing and developing the schooling system. Jordanian policy focused on producing teachers and agriculturists to develop their education and agricultural sectors. Thus, decisions were made to establish teacher training and agricultural training centers. On the other hand, streaming high school students into science, arts and vocational or industrial on the basis of academic achievement in the 9th grade indicates that vocational education is reserved for low achievers, implying that VETT is of a lower rank than academic education. The fact that no vocational school was established for girls implies that Jordanian VETT policy did not consider it necessary for female low achievers to receive training; they could stay at home and wait to get married. The only training opportunity open for them is teacher training. Such a decision on the part of Jordanian policy makers reflects the fact that the role set for women at that time was reproductive. Although it is known historically that Palestinian women's informal participation in agricultural production is very high, it had not been recognized as productive work, but as an extension of their reproductive role. Thus, agricultural training programs were not accessible to women.

Following 1967, the Palestinian education system and curricula, now controlled by Israel, remained tied in practice to the Jordanian Ministry of Education. Decisions taken regarding changes in the system or the curricula in Jordan were imposed on the Palestinian system. In 1985, based on a study of their own situation and labor market needs, Jordanians launched the system of community colleges focusing more on technical training and phasing out the two-year teacher training programs. This change affected the teacher training colleges in the West Bank and forced them to abide by the new direction regardless of its appropriateness to the specific conditions here, since, under the new Jordanian regulations graduates would not be eligible any longer for teaching positions in schools. Moreover, all students in community colleges have to sit for a comprehensive exam at the end of the second year; the curricula outlines and the exam guidelines are set by the Jordanian education system, which is also in charge of endorsing the certificates.

As expressed by the deans of certain community colleges, whom we interviewed, some Palestinian community colleges see the link to the Jordanian Ministry of Education as a burden restricting them from developing the curricula to suit their own situation. They have to abide by the number of hours set for each course and by the general outline of the curricula used in Jordan if their students have to sit for the comprehensive test and receive certificates that would give them access to jobs.

VETT provisions offered by the Jordanian Ministry of Education, reflect gender bias as indicated in the analysis above. Their gender perception of women's role has been traditional; to them women's role is reproductive and caretaking. At one point in the late fifties early sixties, Jordanian education rules and regulations reflected their perception of women's mental and intellectual abilities; they were not recognized as intelligent as men. Based on her personal experience, Dr. Fathiah Nasru, a Palestinian expert on education,

reported that at that period of time high school girls were not allowed to study the same kind of mathematics offered to boys; later when a law was issued allowing girls access to this kind of mathematics, their access was conditioned- girls had to sit for a special aptitude test to prove they were capable of taking the mathematics that was designed only for boys. Although the Jordanian Ministry of Education is not currently in charge of VETT or its provisions, its long-standing policies and its educational philosophy seem to have left its impact on education and on VETT in Palestine. VETT colleges are still organizationally connected to Jordan.

2. Intra-organizational Structure [54]

The intra-organizational structure of VETT providers is expressed in the practices of the institution. The issue to be raised is whether the institution is promoting equal opportunities in decision making structures; whether it is meeting gender needs in terms of internal staffing and staff development; and whether methodologies used and procedures set up are a reflection of gender aware planning. The internal organizational structure in these institutions functions within a male-dominated framework; very few women are in decision making positions. Except for the two women's colleges, all the rest have male deans and male-dominated boards, and regardless of the gender of the institutions' students, the majority of program coordinators are males. However, while some expressed their desire to integrate gender considerations in their planning, other constraints such as financial, legal and capacity considerations make it near impossible in practice.

Non-Governmental VETT Internal Organization

In most of these colleges, decisions concerning staffing, staff and program development are made by a board of trustees and the director or dean of the institution. Internal staffing and staff development at the community colleges do not reflect gender awareness. As indicated in section III B above, the majority of staff and faculty members are males who are also more qualified than the female staff. During interviews with deans and directors of community colleges in Palestine, we observed that no measures are taken to recruit more female staff although a very few complained about not being able to reach female applicants even when they advertised for them. Due to its second-rank status, VETT in general does not attract well-qualified teachers or trainers. In this respect, very little is done to improve the situation; for instance, except in UNRWA institutions, promotion and allowances for VETT staff are non-existent. Because these institutions are facing financial problems, their staff receive low pay and thus are also engaged either in private businesses or in teaching in other institutions to meet the challenges of the general rise in the standard of living. None of these institutions provides services to meet gender practical needs, such as pre-school facilities.

From interviews with administrators at community colleges, we learnt that staff development is not part of community colleges' practices. It is generally known that the staff attracted to work there is of lower quality than that attracted to universities; however, they do not have any procedure to give their staff in-service training or send them on

short training courses outside the country, partly because some lack the vision and partly because some have financial constraints. In general, the majority follow a traditional methodology which is restricted to staff recruitment that meets the minimum needs and requirements for VETT programs; they use obsolete curricula and inadequate equipment; they do not initiate training programs on the basis of concrete market surveys or studies of the prevailing socio-economic needs.

On the average, VETT institutions lack any system for career guidance and student recruitment. The training programs are offered, but no systematic efforts are made to clarify to the students, and particularly female students, or their parents the importance of the program to their future or its relation to the labor market. Career guidance is done in an improvised manner either on the first day of classes or on registration day if students were not admitted to the field of their first choice. As stated in section IV A above, most women enroll in teacher training programs or secretarial and office management programs. Almost no attempt is made either in advising or in assigning quotas to encourage them to explore other fields. During our interviews with community college administrators we were told that a few male students were interested in entering child education or secretarial work and office management; however, they discouraged from that, as they assumed that such fields were suitable for women only.

UNRWA VETT Internal Organization

Although the institutional and financial constraints that exist in the VETT institutions in general do not seem to be an obstacle for UNRWA, UNRWA does not offer provisions appropriate for development. It has a long tradition of systematic methodology and procedures guiding its provisions and internal organizational practices; financially, it is more stable, and thus, it can allocate the funding needed to pursue issues of staffing, staff development, curriculum and methodology development, and provide training equipment and maintenance. It provides experts that plan for its provisions and supervise their implementation.

In comparison with other VETT institutions, UNRWA has been able to attract higher quality trainers; for instance, vocational and technical trainers receive allowances for their vocational and technical skills. It provides staff development such as in-service staff training and short-term staff training outside the country. Every year, all staff members are required to propose a developmental project within their own field; all such projects are published in a biennial issue after they get approved by the headquarters in Jordan and then they are implemented. However, if such projects are not in line with UNRWA's policy or have budget implications, they are more likely to be rejected. The curricula used at their training centers are constantly evaluated and updated.

In addition, UNRWA partially meets the gender practical needs for trainers and trainees. It provides job security and comparatively high salaries. For trainees, it provides free education, free boarding, pocket money and other fringe benefits. It has established an office to follow up on the employment of graduates. However, this office cannot do much to help the graduates since many are trained in areas that are not marketable at least in

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their area of residence as in many cases trainees are admitted to the field under quota and admission policy restrictions. Since UNRWA's VETT provisions were mainly linked to the labor market in the Middle East and in particular in the Gulf, following the Gulf war, graduates of these provisions suffered unemployment, yet no decisions have been made to introduce new provisions related to the Palestinian labor market. For the past few years male VETT graduates in Gaza had demonstrations and sit-ins in protest against unemployment.

If we examine the intra-organizational structure of the only women's institution, Ramallah Women's Training Center, we may find a brighter picture. Although mainline policy concerning methodology and procedure for staffing and development is formulated at the headquarters in Vienna, the Palestinian planners and program providers at this center, RWTC, were able to contribute to the internal organizational policy within the limitations of the general guideline. Internal practices at RWTC reflect the gender awareness and development vision of the ex-director and the present one. For example, the center has moved away from programs, like teacher training, sewing, and hairdressing into the area of training for para-medical and commerce professions. However, they encounter difficulties where they cannot escape policy restrictions. For example, due to geographical quota constraints on admission, RWTC may have to admit students from a certain geographical area into secretarial courses; upon graduation, however, they may never get employed since secretaries are not employable in their area of residence. At the same time; the Center adjusted the curriculum in the sewing program to include teaching sewing because this was required by the employers; this modification gave graduates better employment opportunities.

Regarding target group needs, particularly with regards to counseling and career guidance, RWTC has launched a position for student counseling. However, to avoid budget constraints, this position was given to the registrar who finds herself in a bind trying to apply UNRWA's rules and regulations for admission and meeting students interests and needs. In spite of that, she has developed a system of marketing the programs and enlightening school girls to the importance of having a future career and to their economic and social independence. Although her main concern is to keep the programs operating and to encourage enrollment in new fields, the approach she follows reflects her gender-awareness as well as that of the director and staff at the institution. Furthermore, students at RWTC are expected to attend a certain number of hours of extra-curricular activities which involve a program for raising students' gender awareness. It is an attempt, although it has not been very successful so far. Although RWTC may be considered the most developed in VETT provisions and ahead of its male counterpart centers, the conflict between the intra-organizational structure and the inter-organizational structure seems to stand in way in providing training programs more appropriate to the needs of the trainees and the demands of sustainable development.

D. The Research Sphere

The research sphere involves conducting and evaluating studies on the political, social and economic realities of men and women, and evaluating policies underlying programs and interventions in order to feed into a theory that in turn can feed into methodology and procedures for better provisions.[55] This research approach would help in formulating policies that would respond to existing roles and relations meeting practical gender needs and at the same time lead to a transformation in these roles and relations by fulfilling strategic gender needs. Research should aim at being informative in terms of discovering the roles and needs of men and women and their access to and control over the resources to be considered in planning and implementation of programs. In Tanzania, for instance, guided by research, planners were aware of the necessity of women's involvement in technical training; on these bases, they set up certain regulations to guarantee access to such training courses. However, at the implementation stage, women's enrollment did not improve because the attitude of their families and the faculty did not change and the curriculum did not reinforce the new trend.

In light of the above definition of the research sphere, the review of available research and studies on VETT in Palestine reveals that existing research is not informative. Although this paper refers to several studies, the main focus is on Hashweh's "Towards an Effective, Efficient, And Relevant National Vocational Training System in Palestine", the policy document prepared upon the request of the Palestine Ministry of Labor to be used as a terms of reference in their planning for VETT. National and international studies reviewed here have raised several important questions: What system should we follow in planning for VETT: introducing it in the school curriculum or keeping it separate? Which makes VETT more efficient, following the French system of establishing vocational secondary schools or seeking the German model of apprenticeship training and community colleges? Which groups should be targeted and why? Is the goal of VETT to respond only to the needs of any labor market and the increase of production or is it expected to contribute to the economic and social development of Palestinian society? Should it be only adaptive, trying to solve problems of disadvantaged groups, such as poverty and unemployment, or also transformative trying to change inequitable roles and relations?

Studies on VETT in Palestine tried to address some of the issues raised above.[56] The findings of these studies revealed major characteristics of VETT referred to earlier. Though most of these studies do not deny gender inequity of VETT, the solutions they provide are contained in one or two marginal statements. For example, they refer to the low participation of women in VETT and recommend introducing non-conventional training fields for women. Or they include women among minority and disadvantaged groups like ex-detainees, dropouts and handicapped. Fluitman, for instance, criticizes VETT as being inefficient, ineffective, irrelevant and inequitable. To this effect, he states,

> Equity should be an important consideration in the development of training policies. Disadvantaged groups, notably women, the disabled and ex-detainees, should have

> equal or possibly privileged access to training opportunities which will enable them to be gainfully employed. To this end it may be necessary to establish quotas or special training programmes linked to job creation opportunities. [57]

Muhanned Tull conducted a comprehensive review of most research done in the last six years. He summarizes the recommendations and reform proposals stated in these studies. Examining them one can see that clear and well-defined reform proposals are provided to solve several problems like VETT fragmentation, its inability to respond to the labor market needs or the new technological changes, the lack of adequate equipment and facilities, the low quality of its student body, and its irrelevant and obsolete curricula. However, none of these VETT reform proposals suggest a feasible and serious plan to solve the issue of women's low participation although it is raised as a problem.[58] In his evaluation of the reform proposals and recommendations, Tull himself does not see gender inequity as a serious problem. He criticizes VETT for not responding to the needs of the labor force, the unemployed workers and returnees and places women among special cases. He suggests that "Inadequate orientations towards the needs of special groups especially women, adult workers, handicapped and ex-detainees, and returnees."[59]

Such statements are not based on an understanding of the reasons underlying the under-representation of women in VETT, nor on what their roles and needs are, which would undoubtedly assist in planning for a higher participation. Discussion in these studies implies their unawareness of the triple role of women, of their practical or strategic gender needs, or of their contribution to production, as women's domestic and informal work is not recognized as productive.

Hashweh's study presents an important case among the various significant studies on VETT in Palestine. He states the problem and analyzes some of the factors involved in its making. He summarizes the characteristics of VETT in five main points; the fifth refers to the low participation of women. "...It is shown that women make up only (13%) of the total number of students of industrial and vocational schools and centers."[60] He moves on to analyze this problem referring to work opportunities accessible to women, their low rate in the labor force, wage discrimination, their high fertility rate, and finally their high rate of involvement in agriculture, (giving an estimate that 60%-70% of women participate in production in this sector). However, he does not identify these issues as priorities when suggesting a "possible scenario" for a national vocational training system for Palestine. He suggests three urgent kinds of support to meet the challenges of VETT:

> Raising the level of coordination... Involving industry more actively... Creating a 'Catalyst' to ensure the continuity of the progress of the system in a professional and dynamic way, and through a studied and planned path, responding to the continuous changes in technology and in labour market demands. [61]

This position, in our opinion, follows from a bias towards industry and from the lack of informative research. Considering only the necessity of linking VETT to industry, without

any control, will automatically exclude women from training and in turn from participation in the labor force, since it is conceded already that women participate mainly in agriculture. Also basing recommendations on non-informative research results in a neglect of the role of NGO's in adult informal training. Hashweh refers to the presence of such training provided by around 200 NGOs including cultural centers, charitable societies and development training institutions.[62] It is in most of these institutions where women get access to training. There are no studies that explore this area and evaluate the kind of training it provides; findings of such studies will give a different picture of the needs for training. Linking training to industry without meeting the needs of women in other sectors results in depriving them from access to training and job opportunities.

VI. Summary of Findings

In summary, this part of the study confirmed earlier findings on the system of VETT in Palestine. It showed how the system is underdeveloped and fragmented and how it has been unable to meet the needs of its target group in an efficient and relevant way. However, the findings of this study add a dimension to the previous analysis of VETT, the gender dimension. VETT in Palestine is inequitable. The findings show that in addition to all its problems it appeared to be a system insensitive to gender or gender integration. These findings can be summarized as follows.

1. In addition to fragmentation in the political sphere of VETT, the findings show a gap between stated policy and real practice. For example, at the policy level UNRWA claims integration of women in development to reach equity, yet its VETT provisions target women only in avenues that conform with existing gender roles, that do not contradict their role as biological reproducers and caretakers.

2. On the organizational level, the findings also reveal that VETT in Palestine shows a discrepancy between theory and practice. Staff employment at VETT institutions reflect gender bias; decision making posts are occupied mostly by males. Academically, female employees are less qualified than male employees, reflecting that females have access to narrower avenues in education and work opportunities. In terms of VETT target group attraction and access to training programs and curricula, it appeared that although access to VETT fields of specialization are theoretically open to females and males, yet lack of gender aware career guidance reinforces channeling VETT students into conventional fields that do not conflict with existing gendered roles and relations.

3. In the technical sphere, VETT program providers do not seem to meet the strategic gender needs of their target population. Lack of staff development, career guidance, and introduction of new avenues based on a scientific study of market rendered VETT

institutions almost non-functional. The results also show that very recently the number of females enrolled in mid-level VETT programs, i.e. programs offered at community colleges, was higher than that of males. This finding seems to be related to the status VETT occupies in the education and employment hierarchies. If education is needed for employment purposes, then females can go to community colleges and males to university or abroad, as shown later on in part two of the study.

4. The above stated deficiencies of VETT are in some sense related to the absence of gender aware research which, if provided, would undoubtedly intervene in creating better awareness to gender integration in VETT. Almost all available literature and policy-oriented research on VETT is gender insensitive; the few studies and policy papers that are gender-informed tend to overlook gender issues when they set reform policies and programs. The Hashweh's study discussed earlier, however, is valuable in placing VETT in the mainstream of educational and training concerns and in emphasizing the critical importance of coordination and developing an integrated approach to VETT. To this end, he suggests an advisory board and expert team, both of which would be expected to work in coordination and cooperation to design and implement plans to reform VETT in Palestine.

At this point, however, we must emphasize the dual importance of integrating women into this process, by integrating gender into planning and policy. This was one of the aims of the roundtable discussion held by the Women's Studies Program at Birzeit University with Hashweh and PNA ministerial representatives from Labor and Education, as well as other experts in the field. The roundtable also highlighted that existing research did not offer an adequate information base for gender-integrated planning. Through a sustained discussion, the initial response of male experts- that gender integration was a women's concern- began to change in a positive direction towards a more comprehensive understanding of gender issues as at the heart of economic and social growth. Specific suggestions at the roundtable included such matters as the importance of vocational and career guidance in schools with real attention to gender needs, as well as taking into account women's work and training needs in the informal sector when undertaking vocational planning to avoid their exclusion from the process. Another point raised above was undertaking a serious evaluation of the training role of local and international NGOs in Palestine. Upgrading teacher capabilities and gender awareness and gender-sensitive curricula and career guidance are also essential pre-requisites for an equitable and efficient vocational system.

In conclusion, VETT in Palestine is at an important crossroads where the possibilities of developing innovative and integrated approaches to gender and VETT exist in context of a major transition in Palestinian society, economy and governance. A transitional period as such is, in fact, the proper time to intervene by providing gender-sensitive research. The importance of such research has, in particular intrigued part two of the study undertaken here which examines the status of a group that has not been considered

in the previous research on VETT, high school students as a potential VETT target group.

Notes

1 It should be noted here that the data used in this study were borrowed mainly from secondary sources. For the purpose of data disaggregation undertaken here, some of the data were reorganized and recalculated into percentages. Though some of them may currently be incorrect due to the political changes occurring in the past two years, they were still used in this part of the study.

2 The concepts of "martyr" and "martyrdom" originate in Islam; anyone who dies for a good cause, i.e., in defense of Islam or one's homeland is considered a "martyr". Traditionally, the community is expected to protect the children of martyrs and provide them with a safe and secure life.

3 See the tables provided in T. Maswada and A.A. Al-Kek. *The Technical And Professional Education In The Occupied Territories*. Hebron: University Graduates Federation,1992.

4 UNRWA, "Vocational Training and Job Creation". Vienna: UNRWA Headquarters, October 1992, p.1.

5 *ibid.*, p.27.

6 Unfortunately, due to movement restrictions, we were unable to investigate the organizational structure of VETT institutions governed by the Egyptian system of education in Gaza. Therefore, reference here will be made to the Jordanian involvement in Palestinian VETT in the West Bank only.

7 up to the time of writing, Community Colleges and the Tawjihi (The General Secondary Examination Certificate) wee subject to the Jordanian education system, and the certificates awarded to the graduates were endorsed by the Jordanian Ministry of Education.

8 Mazen Hashweh. "Towards an Efficient, Effective, and Relevant National Training System in Palestine". Society For Austro-Arab Relations, 1995, p.15.

9 Claudio de Moura Castro. "Training in Palestine". In *Training In Transition* prepared by Mazen Hashweh, 1994, p. 98.

10 Taiseer Maswada and A. A. Al-Kek. *The Technical and Professional Education in the Occupied Territories. Hebron:* University Graduates Federation, 1990, p.299.

11 *ibid.*, 1990, p. 263.

12 UNRWA, "Vocational Education and Job Creation". Vienna: UNRWA Headquarters, 1992, p.10.

13 Recently, in 1995, the UNDP has decided to invest in reviving Al-Arroub and Beit Hanoun agricultural centers as part of their agricultural development project. [Based on an interview with Ms Mira Rizeq, the UNDP project manager for Rural Development].

14 Mazen Hashweh, *op cit.*, p.2.

15 Caren Levy. "Critical Issues in Translating Gender Concerns Into Planning Competence In the 1990s". A paper presented at Joint ACSP and AESOP Int. Congress, Planning Transatlantic: Global Change and Local Problems, Oxford UK, (July 8-12, 1991), p.6.

16 *ibid.*, p. 1

17 This concept has been developed by researchers at the Development Planning Unit (DPU), the University College London, London, UK.

18 Moser defines these roles as follows: The reproductive role, which although basically concerned with bearing and rearing children and organizing the household extends to include the reproduction of the labor force and the society as a whole; the productive role, which is

any kind of paid work; and the community managing role, which refers to work done voluntarily to provide basic services and resources for the community which are not provided by the state. See C. Moser, pp. 27-36.

19 Caren Levy modified the gender analysis framework (1991) initiated by Moser in 1985 by adding a fourth gender role, the constituency-based politics role; she also introduced the "web of institutionalization" as a set of organizational tools of gender diagnosis and gender planning (DPU Gender Planning Team, "Training materials developed for training in gender planning," 1990-1993).

20 The Gender Diagnosis approach identifies two kinds of gender needs: practical gender needs, which when met, improve men's and women's living conditions and eases their daily tasks related to their reproductive, productive and community managing roles; these needs are usually concrete and visible. On the other hand, strategic gender needs are more abstract and invisible; when met, these needs bring about a change in the social and gender roles of both men and women, thus leading to gender equity. See C. Moser, 1985, pp. 37-41.

21 W. Norton Grubb, "The Phoenix of Vocationalism: Hope Deferred is Hope Denied." In *Reassessing the Link Between Work and Education*, edited by Lewis C. Solomon. California: Jossy-Bass Inc., 1978, pp. 71-73.

22 Claudio de Moura Castro. "Training in Palestine". In *Training In Transition*, 1994, p. 97. See also the statistics on VETT in Hashweh (1994) and Maswada and Al-Kek (1990), on the basis of which the percentage 14.7% was calculated.

23 UNRWA. "Training Courses and Admission Requirement." Instructions distributed to applicants by the Ramallah Women's Training Center, (1994-1995).

24 Lamis Alami. "Factors to Be Considered in the Development of Vocational Education" 1994, p. 6 (Unpublished Paper).

25 Salwa Abu Zayyad Abdel-Wahad, " Testing Vocational Interests at the UN Ramallah Women's Training Center " (Unpublished). 1992, p. 12.

26 For detailed information, see section I "Overview of Schools" and section IV " Survey Results" in Part II of the study

27 These centers are now being operated by the Palestinian National Authority, Ministry of Labor and Ministry of Social Affairs.

28 Mazen Hashweh, *Training In Transition*. 1994, pp. 16-19.

29 Fees for VETT programs range from no fees to a total of US $ 350. UNRWA VTCs, for example, provide training and boarding free of charge. Civil Administration VTCs provide free training and give a stipend of US $ 35. Private VTCs charge US $ 350 per year. *Ibid.*, p. 19.

30 Fred Fluitman, "Human Resources Development in the Occupied Palestinian Territories". In *Training In Transition*. 1994, p. 90.

31 Mazen Hashweh. "Towards an Effective, Efficient, and Relevant National Training System in Palestine". Society For Austro-Arab Relations, 1995, p. 12.

32 Caren Levy, 1991, p.6.

33 Statistical data displayed in this table are based on figures borrowed from and Al -Kek, 1990, which were reorganized for the purpose of data disaggregation undertaken here.

34 See table 1 in the appendix.

35 Figures displayed in this table and table 3 are based on statistical data borrowed from Hashweh, 1994.

36 Specific information on these centers is not accessible except through personal contact with individuals in the Israeli Ministry of Labor; also sources available do not include specific information about the Gaza Strip.

37 See tables 3, 4, 4.1, 4.2 and 4.3 in the appendix.

38 The number 6757 is the sum of student enrollment given individually for each community college in Maswada and Al-Kek, 1990, pp. 117-218.

39 Muhanned Tull (1995) reports on 14 Community Colleges. Enrollment figures he provides for the year 1994 show a total of 4059 (50% females and 50% males). However, in my opinion, this should not be considered a drop in enrollment because Tull excludes teacher training and Islamic Studies programs.

40 The analysis presented here was done on raw data taken from the FAFO survey 1992. Acknowledgment should be given to Jamila Abou Dahou who did the SPSS analysis.

41 Data used here were gathered through interviews with key personnel at the mentioned colleges, and through observations made during the interviews and visits to the same colleges.

42 Caren Levy, op cit., p.3.

43 Only a year ago the PNA Ministry of Education took charge of education and higher education. However, the community colleges are still linked to Jordan through the curricula and the Comprehensive Exam, a major requirement for degree authorization.

44 Martin Caranoy. "Efficiency and equity in vocational education and training policies ". *International Labour Review*, vol. 133, 1994, No. 2, p. 222.

45 UNRWA. "*Vocational Training and Job Creation*". Vienna: UNRWA Headquarters, October 1992, p. 9.

46 UNRWA. "*Human Resource Development*". Vienna: UNRWA Headquarters, Oct. 1992, p.11.

47 *op cit.*, p.5.

48 *ibid.*, p. 7

49 *op cit.*, p. 8

50 *ibid.*, p. 8

51 Caren Levy, *op cit.*, p.7-8.

52 Musa Buderi. "The Modern Social History of Palestine". In *Palestinian Society In the West Bank and Gaza Strip*, edited by Lisa Taraki. Dar Al-Aswar: Akka, 1990, pp. 54-55 (in Arabic).

53 See also footnote 13 and footnote 49.

54 This section is based on data collected during personal interviews with the deans of the two UNRWA community colleges and six private colleges. They do not refer to the status of the four community colleges currently run by the PNA since at the time of this study they were still in the process of restructuring.

55 Caren Levy. *op cit.*, pp. 6-7.

56 See Hassan Al-Kek (1988), Maswada and Al-Kek (1990), M. Miaari (1992), Abdel-Shafi (1992), L. Alami (1994), Fluitman (1994), Castro de Moura (1994), the proceedings of the Ministry of Labor Workshop in Jericho (1994), and others.

57 F. Fluitman. "Human Resource Development in the Occupied Territories". In *Training In Transition*. 1994, p.89.

58 Muhanned Tull. "Palestinian Technical and Vocational Training: Current Situation, Problems and Reform Proposals". NFID, 1995, pp. 20-27

59 *ibid.*, p.29

60 Mazen Hashweh. *Towards an Effective, Efficient and Relevant Training System in Palestine*. 1995, p.2.

61 *ibid.*, p. 31

62 *ibid.*, p. 2

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Part II[1]: Gender Analysis Of Knowledge, Attitudes And Perceptions Of Vett

Part I of this study focused on gender planning and integration in the four spheres of VETT in Palestine: the political, the organizational, the technical and the research spheres. This part focuses on the technical sphere, looking particularly at male and female grade 12 students in the West Bank, as potential VETT beneficiaries. It is primarily an empirical study that explores these students' experiences and their own perceptions of their realities, that is, their knowledge, attitudes, perceptions, and practices in relation VETT. It also examines gender disparities in gender role perceptions and relations, with the intention of informing the current policy debate on education reform and development strategies in secondary and post-secondary educational systems. To provide the contextual parameters within which the study was conducted, an overview of the schooling system in the West Bank is presented below.

I. Overview of Schools in the West Bank

As indicated in Part One of the study, the school system in Palestine is operated by three authorities: the Palestinian National Authority (PNA), the United Nations Relief and Works Agency for Palestine Refugees (UNRWA), and the private sector. The schooling system is divided into two cycles, basic compulsory education, and secondary education. Secondary education is either academic offering two streams, arts and science, or vocational offering vocational or industrial education and training. Graduates of academic secondary schools can apply to universities or community colleges to obtain higher education; graduates of vocational secondary schools can study a limited number of fields offered at community colleges, but they do not have access to university paths. Accordingly, some schools offer only basic education or academic secondary education, or both; others may offer vocational, industrial, or commercial secondary education, in addition to basic education.

According to the *Educational Statistics Yearbook* (1994-1995), 355,269 students were enrolled in 1086 academic schools in the West Bank. As indicated in figure 1, of these schools 885 are supervised by the PNA, 103 by UNRWA and 99 by the private sector.[2] With the exception of some village schools which are coeducational due mainly to low enrollment levels and spatial and/or funding constraints, the majority of public and UNRWA schools are separated by gender. Data indicate a total of 491 coeducational schools in the compulsory and secondary cycle of which 273 are public, 66 are UNRWA and 71 are private.[3]

The vast majority of private schools are coeducational at the primary level; several are coeducational at the secondary level as well. Until very recently, most private schools were run by religious (Christian and Muslim) organizations. Recently, the West Bank,

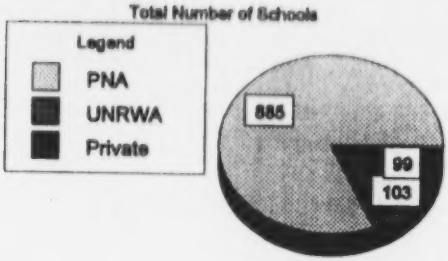

Figure 1 School Distribution by Authority

especially its central region, is witnessing an increase in the number of private schools operated as commercial enterprises to accommodate the needs of Palestinian non-native speakers of Arabic.

In general, schools operate six days per week for five to six hours per day depending on grade level and on whether the school operates a single or double shift. Due to space and funding constrainjs, some schools operate on a two-shift basis. Almost 20 percent of public and UNRWA schools operate on a double shift system; for instance, over 10% of the public schools in Hebron district operate two shifts.[4]

The school system is divided into two stages: basic compulsory education and secondary education. Basic compulsory education comprises grades one to ten; on the basis of their academic achievement in grade 10, students advance to one of two streams (science or arts) at the secondary level, or they enter vocational schools, or drop out altogether. Accordingly, some secondary schools are exclusively for science students; others are exclusively for arts students, some cater for both arts and science, and still some are vocational (industrial, nursing and commercial, as shown in Table 1 in appendix 1). This distribution of schools is contingent on student enrollment, the location of the school, and available infrastructure.

Streaming into science, arts, or vocational streams occurs at the end of the basic cycle. Upon the completion of grade 10, students are either streamed into the science stream where focus is placed on four scientific subjects (mathematics, physics, biology and chemistry) in addition to languages and religion; or they go into the arts stream (which some call the literary stream); this stream focuses on social sciences (such as history, geography, and social studies) and languages, which are more emphasized than in the science stream. Students who go into vocational streams have access to curricula that focus on vocational education and practical training for a certain trade such as carpentry, electrical maintenance, heating and air-conditioning, in addition to some basic subjects such as language.[5]

As mentioned above, for the year 1994-1995, 355,269 students were enrolled in academic schools in the West Bank, of which females comprised 48.4 percent. The total number of students in the secondary cycle in the West Bank amounted to 27,678. One

thousand one hundred and ninety-eight students, forming about 0.04%, were enrolled in vocational and industrial schools. Enrolment in secretarial and nursing programs accounted for 16 percent of all female student enrollment. In general, dropout rates seem to be high, especially at the secondary level. The cumulative drop-out rate for 1993-1995 was 2.25 percent.[6] Rates for the elementary level, for instance, did not exceed 0.55 percent indicating a negligible difference between male and female drop-outs. At the secondary cycle, dropout rates increased exceeding 9 percent; these rates were comparatively higher in the 10th, 11th, and 12th grades for students who enrolled in the arts stream than for those in the science stream; the female dropout rate was 9.06 percent while the male dropout rate was 8.5 percent.[7]

This report of almost equal dropout rates for males and females looks surprising and unrealistic. One would tend to believe that such a small difference was due to the conditions that prevailed during the *intifada;* the rise of child labor, the arrest of youth, the closure of schools, the difficult Israeli military restrictions, and the increase in early marriages, which existed throughout the *intifada,* had affected boys more than girls, and had perhaps caused them to drop out more than girls. However, what should be considered with more care is the general and universal tendency of excluding women from formal statistics. It is, for instance, widely-known that female mortality rates, and to a smaller extent female birth rates, are not recorded in formal statistics. UNESCO reports that although the female-male distribution is equal in the Palestinian population, female enrollment in basic education reaches 48.1% and in the secondary cycle it reaches 45.4%; at the same time, there are no records of those girls who never enrolled in schools.[8] The question which is whether one should believe this finding, that the female dropout rate is almost equal to that of males?

Our knowledge in the field of education urges us to view such statistics with due care and caution. Although official statistics indicate that the female dropout peak occurs at the age of 14-15 years, i.e. in grades eight and nine, they also show that in the secondary cycle recorded female dropout rates fall. We tend to believe that female dropout rates do not fall because girls who make it to secondary education, in fact, have passed this critical stage. It is more likely that some dropout rates are never recorded; the structure of the educational system seems to allow for such inaccurate statistics. School administrators are required to report the number of dropouts at the start and throughout the scholastic year. However, dropouts occurring during the transitional stage between basic education and secondary education do not seem to be officially recorded.

After students complete grade nine (the last grade of the basic cycle offered at UNRWA schools), they are expected to join public schools or private schools if they choose to go into secondary education; in public schools, transfer to the secondary levels occurs in grade 10 at the end of the basic cycle if the students' original school had no secondary classes. Thus, students who graduate from a basic school, at the end of grade 9 (UNRWA) or grade 10 (Public) and do not register in a secondary school would most likely be excluded from official statistics. In brief, even if the dropout statistics reported above were believed to be true, there remains the question of their inadequacy having not

included the dropout rates during the transitional stage from grade 9 to grade 10, or from grade 10 to grade 11.

An important issue in Palestinian schools is curriculum; so far there has never been a curriculum designed to meet the needs of Palestinian students. Since 1950, the Jordanian curriculum has been applied in the West Bank and the Egyptian curriculum in the Gaza Strip. Efforts are now being exerted to develop a national Palestinian curriculum. For over two decades, teaching focused on core subjects such as mathematics, the sciences, and Arabic language. Up until two years ago, general vocational education was not incorporated in the curriculum. Less attention had also been given to other subjects, like fine arts and physical education. Teachers may be assigned to teach fine arts and physical education regardless of training or interest in order to complete their load.

The curriculum used in these classes follows a general outline or uses books developed for Jordanian students. Time allocated for non-science or non-language classes was used (and is still used in some cases) for make-up classes for the core subjects. Current teaching methods focus on rote memorization and do not develop analytic thinking. These two issues – curriculum reform and teaching methodology – in addition to extra-curricular activities and student counseling are now being seriously considered in the planning and designing of a Palestinian educational system. In fact, fine arts and physical education teacher training programs have been launched at the Palestinian Technical Colleges to meet the needs of basic and secondary public schools.

Hypothesis. It is claimed here that gender bias of VETT in Palestine and its inferior status in comparison with academic university studies is established on the basis of values, concepts and power relations reproduced through two socialization agencies – the family and education. In terms of gender relations, masculine and feminine identities are reproduced through education and the family; they are also formulated through the ideas, beliefs and practices created and recreated sequentially with time through the contact between old and new structures.

It is hypothesized here that these two major agencies are responsible for the attitudes of students towards education in general, and VETT in particular, and therefore to a large extent, they determine their future. Values and status associated with particular fields of specialization, whether in academic or VETT tracks, or the professions are also important determinants in student choices, regardless of their abilities and interests or market forces. Ideas, beliefs and practices of parents, teachers and administrators, as well as students themselves, *vis-a-vis* existing structures mirror the student professional life and future.

II. Objectives of the Study

Upgrading and developing VETT system in Palestine to international levels of efficiency, cost-effectiveness, quality and equity require a special emphasis on human and material resource development aimed at creating the appropriate conditions to stimulate a change in power and gender relations. A starting point lies in understanding the conditions which

shape or affect students' personal life and how students themselves interpret and assess their realities regarding these conditions. Consequently, this part of the study (Part II) adopts a student-centered approach in surveying attitudes of future VETT target groups, that is high school students who may choose to join community colleges.

A further purpose is to become informed about the opinions of key persons responsible for VETT programming and institutions. The overall aim is to understand the knowledge, attitudes, perceptions and practices of VETT target groups and institutions: how students, schools and colleges reflect or influence the social constructs which form the parameters of socially sanctioned, and perhaps outmoded, behavior and expectations. This part of the study (Part II) also attempts to reveal some of the ways in which the family, educational and VETT systems reproduce power relations and gender-biased values and concepts, which in turn affect student practices.

Specifically, this part of the study attempts to understand how students interpret their realities regarding their plans and attitudes towards VETT and their future careers, and how they perceive and relate to accepted gender roles and relations. In other words, are students aware of the gendered world they live in? How does this world structure their understanding and shape their future? Does gender affect students' knowledge, attitudes and practices towards VETT and their life opportunities?

As shown in Part I of the study, VETT students in Palestine are typically characterized as low achievers coming from a certain socio-economic background. The questions addressed here are related to whether VETT conditions apply equally to both male and female students. For example, are VETT characteristics equally typical of both male and female students? Do male and female students have similar or different perceptions of what shapes their present and future roles? Do they see that they have equal access to and control over their life opportunities? It is believed that being able to make choices and future plans depends on access to and control over resources; therefore, having access to information about the available opportunities regarding VETT and market needs is crucial. In this context, do male and female students have equal access to information resources about VETT when they are available? Does their perception of the professions for which VETT prepares students reflect their awareness of gender roles and relations?

In this framework the study focuses on high school students to uncover their knowledge, attitudes, practices and perceptions of life opportunities before they leave high school and become ready to start a new phase of their life. In particular, it attempts to understand these students' gendered preconceptions regarding the professions for which VETT institutions prepare students, how they perceive educational institutions and how they make choices, and the factors that affect their knowledge, attitudes, and perceptions of VETT in relation to academic education.

III. Research Structure

The study was designed to examine data from three different sources. First, primary and

secondary sources of enrollment levels in schools, rules and regulations, staffing, and the curriculum were examined. Second, brief interviews were conducted with high school teachers, secretaries and principals. Third, a survey was administered to potential VETT students, i.e. high school students in grade 12, utilizing a set of questionnaires. For this purpose material was gathered from public institutions such as the Palestinian Central Bureau of Statistics (PCBS), the Ministry of Education and Higher Education (MEHE), some secondary schools and other related institutions.

1.0 Questionnaires Structure.

The questionnaires were specifically designed for and administered to 12th graders enrolled in public high schools (which are operated by the PNA, or the Islamic Awqaf as in the case of East Jerusalem). They were designed to obtain responses to questions related to the following four areas, with a focus on gender differences.

General Demographic Characteristics. This section was designed to provide demographic data concerning each respondent including age, sex, marital status, area of residence, family size and parents' employment and educational status.

Academic Status and Work. This section included a set of questions designed to explore respondents' academic level, achievement, and interests, in addition to any involvement in paid work, or in work within a family enterprise, and the number of work hours per week.

Aspirations and Expectations. This section included questions related to the respondents' aspirations and expectations regarding future plans, work, higher studies, marriage, or travel abroad, and the factors influencing these choices

Knowledge, Attitudes and Perceptions. This section included information pertaining to the respondents' knowledge of sources of information on VETT, including the available universities, community colleges, and different fields of specialization, and work opportunities, as well as the sources they utilize to obtain such information. It also dealt with information portraying the respondents' perceptions of academic and VETT studies, their perceptions of the professions for which work opportunities are available, and their perceptions of the division of professions on the basis of gender.

2.0 Survey Methodology

2.1 Sampling. Twelfth grade (*Tawjihi*) students were interviewed, as they would be candidates for seeking either higher studies or work or both. In addition, the study chose to look at students' attitudes, knowledge and perceptions, focusing on gender and regional

differences, urban and rural differences and differences between arts and science students. Therefore, the main concern was to draw a sample that would include gender, regional, locale and stream representations. To capture the targeted differences, it was decided to draw the sample from the largest student population in the largest towns and villages in three regions in the West Bank, the south, the north and the center, which are officially referred to as districts. The selected districts were Nablus (northern West Bank), Ramallah and East Jerusalem (central West Bank) and Hebron (southern West Bank).

The sample was drawn from a listing of all schools in the West Bank which reported the number of students who passed grade 11 and the number of grade 11 classes and sections for the year 1994-1995 (i.e. prospective *Tawjihi* students for the year 1995-1996). The schools were labeled with codes that identified them as science or arts, single-sex or co-educational, in rural or urban areas. The sample was drawn to represent male and female, and rural and urban students, in both the science and arts streams in public high schools in the West Bank and East Jerusalem.

The total number of prospective *Tawjihi* students for 1995-1996 was 14,062 divided almost equally by gender, of whom 7,006 were females and 7,056 were males. Almost 69 percent were enrolled in the arts stream and 31 percent in the science stream. Fifty-nine percent were registered in urban schools and 41 percent in rural schools. The study population in the three selected districts from which the sample was drawn totaled 8,419 students, that is, forming about 60% of the total prospective *Tawjihi* students for 1995 - 1996. The sample on which the survey was carried out comprised 10% of this total (8419) with a gender, stream and locality distribution conforming, as much as possible, with the distribution of students in the entire study population.

Following the criteria set for the sampling, the schools with the largest enrollment in the *Tawjihi* classes / or sections were selected; for instance, if two schools in the same village or town had science *Tawjihi* classes, one had 3 sections and the other 2, with each section having 30 students, the former school would be selected to be included in the sample. Accordingly, the largest schools in the cities of Nablus, Ramallah and Jerusalem, and Hebron and in the villages in their vicinity were selected. The total number of prospective *Tawjihi* students in the four districts and in each individual district was calculated. A 10 percent sample of the total number of students in the selected districts was drawn and was proportionally distributed over the four districts taking into consideration the three variables, gender, streams and locality, as illustrated in Tables 1-5 in appendix 2.

2.2 Pilot Study. Before launching the actual survey, the questionnaires were tested in a pilot study in public schools. The questionnaires included questions formulated on the basis of the data and findings of the first part of this study, as well as on the results of the pilot. Some questions, which dealt with issues where our knowledge and information were limited, were deliberately left open-ended to gather the relevant information, on which basis closed questions were composed. Others were intended to be open for free answers.

The institutions selected for the high school pilot represent both males and females,

and arts and science, located in two somewhat distant villages, half-way between Ramallah, in the central region, and Nablus, in the northern region. The questionnaires were administered to the class as a whole. As they filled out the questionnaires, observations were made. Two methods were tested; one was individual completion of questionnaires, and the other was collective, whereby the questions were read one by one allowing the students time to check or write their answers.[9]

Based on the recorded observations, it was decided to abandon the latter approach, as it proved to be more time-consuming, chaotic and confusing, but to still administer the questionnaires to the class as a whole. It was necessary to insist that the class teacher should not interfere and, indeed, that it would be preferable if she/he would not attend. The results of the pilot questionnaires were carefully studied, and accordingly they were modified linguistically and in content and were regrouped into themes.

2.3 Data Collection and Analysis. After completing the pilot study and revising the questionnaires, the survey was administered in the three chosen districts by a team of trained field researchers who participated in the pilot. The survey began in mid-October 1995 and lasted two months. Upon arrival at the school, a meeting was held with the principal to explain the objective of the study; he/she were welcome to look at the questionnaires, and to keep a copy if interested. They were given specifications of students needed for the survey, such as number and stream. Where there was more than one section of a class, it was left to the principal to select the section at his/her convenience; where the sections had more students than needed, random selection from class lists was applied.

Questionnaire administrators began by explaining the objective of the study and giving clear instructions on the procedure; students were assured of the confidentiality and were requested to answer the questions as precisely and as frankly as possible. Time consumed to complete the process ranged between 35 and 55 minutes depending on the students' comprehension abilities; some needed a full hour.

The data were analyzed using SPSS analysis program ; processing the data went as follows: data checking, clearing, coding, feeding, and checking, all completed before the analysis of the results began.

3.0 Research and Survey Constraints.

This study fell under constraints of two kinds: like any field research, it faced technical and logistic constraints. Unlike in developed countries, the study also faced infra structural constraints, and more important those that emerged from the political conditions prevailing in the eighteen months.

Due to logistic, military and political constraints relevant to the Palestinian context, such as military closures and mobility limitations imposed by the Israeli occupation at times when closures were not in effect, it was impossible, first, to choose a sample that was representative nationwide, as planned. Instead, it was decided to carry out the survey in the largest districts in the West Bank, in terms of population size, as illustrated above.

Due to the same reasons, excluding the Gaza Strip from this part of the study was a hard, but inevitable, decision. Although considered public schools, UNRWA schools were excluded from the study because they offer basic education only (up to grade 9). The study recommendations, thus, would be applicable to the West Bank and East Jerusalem public schools, rather than to Palestine as a whole.

Data collection was affected by technical constraints. As planned and per the sample, data collection started in Nablus in one urban school and two rural schools (one male and one female); because of technical problems, the collected questionnaires had to be considered as part of the pilot study. When the data collection was repeated in the same area, the urban school remained a part of the sample, as it had a large number of *Tawjihi* students; however, the rural schools had to be replaced with others although they were not totally compatible with the sampling design.

Data regarding school lists, number of sections, distribution of students and schools according to streams were obtained in August 1995; however, when the survey started, these data proved to be imprecise in certain instances. Due to the transitional stage which Palestine has been going through[10], the educational institutions still lacked order and organization, as well as all the necessary facilities, such as photocopiers, computers, printers, and data banks.

The pace and the smooth flow of the research were seriously interrupted by an infrastructure not developed enough to conduct field research. These included underdeveloped coding, data base, and computer facilities. Lack of trained research assistants and coders made the research process more complicated and time consuming.[11] Obtaining access to data for the purpose of sampling and locating and identifying schools was time-consuming; getting access to accurate statistics was near to impossible.

Although the Women's Studies Program, the institution hosting this research, offered us high-level technical support, problems such as the weak electric system, a constantly ineffective system unable to meet the requirements of high technology, did not only delay work, but also caused a lot of psychological tension and pressure.

IV. Survey Results

A. THEME 1: General Demographic Characteristics

1.1 Surveyed Schools. A total of 853 twelfth grade high school students were surveyed. These students came from 20 schools, 11 urban and 9 rural, in three regions in the West Bank. In the south, the two urban schools and the two rural schools visited were separated by sex, each of which included science and arts students. In the northern region, we visited four urban schools and three rural schools; one rural school was coeducational and one male school had both arts and science students; the rest were all separated by sex and by stream. In the center, we visited six urban schools and three rural; all schools were separated by sex, and all were separated by stream, except for one rural school and one

urban school. The central schools included two schools in East Jerusalem, one for males and one for females.

1.2. Student Population.

- **Age.** The findings revealed that the majority of the surveyed students fell within an age range of 17 and 18; 48% were 17 years old, 46% were 18 while 4% were 19 and about 2% were 16. The mean age number, 17.5, represented the normal age for 12 graders; with an insignificant difference between males and females, 17.45 for females and 17.63 for males.

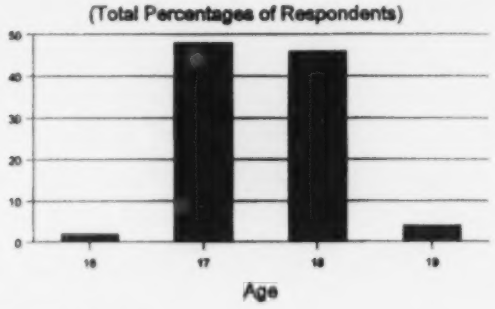

Figure 2 Student Distribution by Age

- **Sex.** Males accounted for 48 percent of the sample and females for 52 percent. Although sex of the study population was controlled for in the sample, this representation was consistent with population data reported elsewhere. According to the FAFO survey of living conditions in the occupied territories males and females are distributed almost equally among the Palestinian population in the age group of 15 years or older.[12]
- **Locality.** Of the study population, 47% came from rural areas, 47% from urban areas, and 6% from refugee camps. Gender distribution of locality was as follows: six percent of the female students and the same percentage of the male students came from refugee camps. Of the total female students, 48% were city or town residents and 46% were village residents; of the male student population 46% were from cities / towns and 48% were from villages.[13]
- **Region.** In total, 42 percent of the surveyed students were from the south, 20 percent from the north, and 38 percent from the center including East Jerusalem (which formed 9% of the total). The figure shows male and female distribution by region. Of the total, 41% of the females came from the south, 16% from the north and 43% from the center while 43% of the males were from the south, 24% from the north and 33% from the center.
- **Marital status.** Data on students' marital status revealed that although the vast majority of students were single, more females than males were either engaged or married. The

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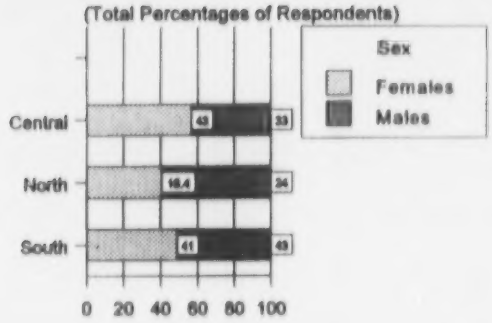

Figure 3 Distribution by Region by Sex

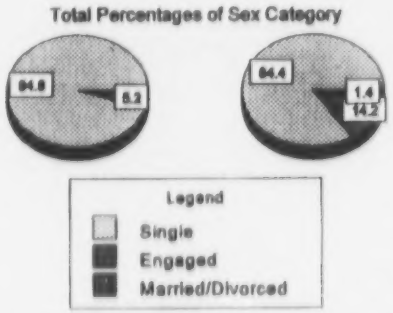

Figure 4 Marital Status by Sex

findings showed that 89.4% of the surveyed students were single; the remaining 10.6% were either formally or informally engaged (9.9 %) or either married or divorced (0.7%). However, as shown in the figure, all married or divorced students were females. While 14.2% of the females were engaged, only 5.2% of the males had the same marital status.

This finding seems to be one indicator of early marriages among Palestinian women [14], especially if the dropout rates in schools and the reasons for dropout, as reported in the FAFO survey, were considered. The FAFO study reported that girls seemed to drop out more frequently than boys and apparently for different reasons. Boys seemed to leave school early either in search of work or due to low academic ability. In contrast, girls seemed to leave school early either due to early marriage or low academic ability.[15]

Until recently, when the PNA took control over education, married women were by law banned from attending school. We were informed that although this law was strictly observed, it was never put explicitly in writing as it had been considered a sensitive

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social issue that ought not to be approached if conflicts were to be avoided.[16] In October 1995, the Ministry of Education and Higher Education issued a memorandum allowing female married students to complete their school education.[17] Such an attitude on behalf of the Ministry is a step forward towards discouraging students from dropping out before completing secondary education and their awareness of the problem of female early marriages and its impact; however, it implies that the Ministry does not intend to deal directly with this social issue, an issue that seems beyond their capacity at this point. We believe that such a law is like the two sides of the coin: on the one hand, it discourages female dropout, and on the other, it encourages female early marriages, as early marriage in this case would not hinder finishing school. Thus, a better and more effective procedure would be to work towards legislating a law that would raise the marriage age for both girls and boys.

Another finding also reported by the FAFO study was that Palestinians were more likely to invest in the education of their male children, seeing in the educated sons future social and economic security[18]. During the survey, we asked all school principals for their opinion regarding the reasons underlying school leaving; they confirmed the FAFO finding. Principals of girls' schools unanimously reported early marriage and poor academic achievement as the two major factors; some added distance and unavailability of transportation, or family attitude towards women's education. Principals of boys' schools, however, stated that boys dropped out in search of work or due to poor academic abilities.

B. THEME 2: Schooling and the World of Work.

Looking at the results regarding students' academic achievement, their preference between academic and vocational studies and the field they desired to explore, we found that streaming, or access to curricula in the sciences, had an important relation to all of these variables. In broader terms, the educational system represented by streaming students into arts, science or vocational was an important factor determining students' future relation to the world of work.

What is the educational context of streaming in Palestine? Streaming students into arts and science streams has been in line with the Jordanian law of education, the law in force in the West Bank since 1964. This law states that secondary education generally aims at "developing human resources needed by Jordanian society in the course of its social and cultural development towards a future industrial society. It is concerned with preparing students and developing their abilities to suit their interests, on the one hand, and to meet the existing and future needs of the society, on the other, all of which is expected to be achieved through introducing variations in secondary education for both males and females."[19]

Item 17 of the same law expresses what actions the Jordanian Ministry of Education has taken to achieve variations in secondary education. It states that these variations can be achieved through "streaming secondary education into three major kinds: academic secondary education which includes science and arts streams; vocational secondary

education which includes agricultural, industrial, and commercial schools, vocational schools for women and other vocational schools; and any other schools that the Ministry decides to establish in order to respond to the country's needs.[20] This streaming system has been applied to Palestinian schools for the past four decades, regardless of its appropriateness to the Palestinian context; the philosophy of streaming is still followed even after the PNA has taken control over education.

How do students get streamed? According to the Jordanian education laws, distribution of students over the different secondary schools follows special rules and regulations issued by the Ministry.[21] Streaming happens in grade 10, at the end of the basic cycle of education; it is based on students' final average scores, particularly in the science subjects: physics, mathematics, chemistry and biology. To be admitted to the science stream, students had to score an average of 70% or higher in the four science subjects; he/she cannot have a failing score in any of the remaining subjects. Students who fulfill these requirements are free to join the science or the arts stream; those who score less can join the arts stream or the vocational and industrial schools. The education system allows students at any level of academic achievement to freely choose streams offered in vocational or industrial schools; however, very few do so. At the completion of the academic or vocational secondary cycle, students sit for a general secondary certificate examination, the *Tawjihi*. Obtaining the *Tawjihi* qualifies them to go on to higher education at the universities or community colleges. For those enrolled in vocational / industrial schools, this certificate qualifies them to practice the trade they got trained for.[22]

Based on the philosophy of giving access to equal opportunities in education, the PNA Ministry of Education and Higher Education issued a new regulation to encourage students to enrol in the science stream, which was implemented starting the end of the academic year 1995-1996. It states that the student's score in the required science subjects should not be less than 57.5 percent; he/she should not have a failing score in any of the remaining subjects if he/she is to be allowed into the science stream. In addition, the student has to express an interest in joining the science stream by filling out an application form.[23]

Two other issues in the schooling system which seem to follow streaming are the subjects focused and time allocated for these subjects. In relation to streaming, focus on different subjects, time allocated for each of these subjects and the distribution of points over each of them vary with the education cycle. If we consider the subjects that are focused on in the basic cycle, we find that up to grade 8, focus is on what is termed "core" subjects. These are mathematics, general science, religion, social sciences, Arabic and English. In grades 9 and 10, general science becomes more specifically defined as physics, biology and chemistry, each of which is assigned a separate textbook, but is allocated 200 points. Mathematics, however, is taught as a separate subject, and is given alone 200 points. In the secondary cycle differences of a similar kind exist between the streams, arts and science. For instance, scientific subjects are more emphasized in the science stream, while languages are more emphasized in the arts stream. In grades 9 and 10, when students are getting prepared to be streamed, they carry a heavier load in terms

of the subjects they study and the time allocated for these subjects than in earlier or later grades. However, what determines their streaming is the points they score in grade 10.[24] The following discussion presents an analysis of the data obtained on students' averages in grade 10 and 11 in relation to their streaming.

2.1. Students Academic Status. In the context of what is outlined above, what does the academic status of the surveyed students tell us? Academic status here refers to several features that characterized the students' academic standing, such as whether they were arts or science students, the averages they scored at the end of grade 10 and grade 11, and the extent to which they were motivated to learn. In this respect, we were interested in finding out what factors might have been interactively involved in affecting their academic status. Therefore, they were asked to respond to questions regarding their academic achievement represented by their final average in grades 10 and 11, and their assessment of their motivation and interest in schooling, rating it as high, average or low, giving the reasons underlying their assessment.

- **Arts or Science.** Of the surveyed student population, arts students formed 60 percent and science students formed 40 percent, with males and females almost equally represented in each.
- **10th Grade Averages.** Of all respondents, 13% reported they scored a final average of 90 percent or higher, 28% between 81 and 90 percent, 30% between 71 and 80 percent, 22% between 61 and 70 percent, and 7% scored an average of 50 percent or lower.
- **11th Grade Averages**. Of all respondents, 7 percent scored an average of 90% or above, 30 percent between 81 and 90, 35 percent between 71 and 80, 23 percent between 61 and 70, and 6 percent scored 60 or lower.

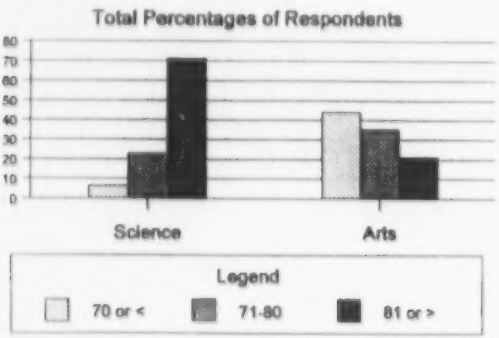

Figure 5 10th Grade Averages by Stream

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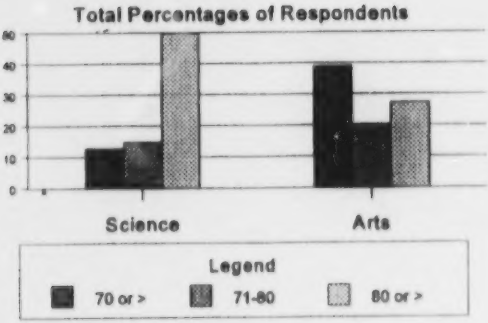

Figure 6 11th Grade Averages by Stream

2.1.1 10th Grade Averages. To compare the achievement of students in relation to their streaming and their sex, respondents were grouped into three categories: those scoring 70% or lower, those scoring between 71% and 80% and those scoring 81% or higher. Examining the achievement of students in the arts and science streams in grade 10, we found major differences in favor of higher scores for science students. Figure 5 indicates that the majority of students (i.e., 71%) who were streamed into science scored an average of 80 or higher, 23% scored between 71 and 80 and a small minority scored 70 or lower. In contrast, the majority of the arts group (i.e., 44%) scored an average of 70 or lower and 35% scored between 71 and 80 while the smallest percentage (21%) scored 80 or higher. (Chi-Square =233.89291, p=0.00000)

2.1.2 11th Grade Averages. Similar differences were maintained in the 11th grade. Science students achieved higher scores than arts students. The highest percentage of the arts students scored up to 70, 33% scored between 71 and 80, and 13% scored 81 or higher. In contrast, about half of the science students got an average of 81 or higher, 37% got between 71 and 80, and only 13% got an average lower than 70. This difference in the achievement of students in arts and those in science showed high significance. (Chi-Square = 78,90382, p=0.00000).

When averages in grades 10 and 11 were controlled for streams selecting out males and females separately, differences between students in science and students in arts also showed significance: science students had higher averages than arts students which confirmed a relationship between achievement and stream. Streams appeared to be a determinant factor of the students' level of achievement. Table 8 shows about three quarters of male students and of female students in science in grade 10 obtained the highest scores, while only 14% of the males and 27% of the females in the arts stream scored a similar average. These figures, however, present an interesting observation: the scores of female students in the arts reflected better achievement than those of males; in fact, females who scored the highest averages in the arts stream were twice as many as their male counterparts.

Table 8 10th Grade Averages by Sex by Streams
(Percentages of Male Category and Female Categories)

10th Grade	*Males*		*Females*	
Averages	*Science*	*Arts*	*Science*	*Arts*
70 or <	4	51	8	38
71 -80	24	35	21	35
80 or >	72	14	71	27
Total	100	100	100	100
	(Chi-Square=160.68732, p=0.00000)		(Chi-Square=85.74298, p=0.00000)	

Table 9 below shows the differences between males and females in science and in arts. Similar to the findings on students' averages in grade 10, the figures in Table 9 show that both male and female students in science in grade 11 did better than their counterparts in arts. Although the percentage of those who scored the highest averages was lower in grade 11 than in grade 10, students in science still did better than those in arts.

Table 9 11th Grade Averages by Sex by Streams
(Percentages of Male and Female Categories)

11th Grade	*Males*		*Females*	
Averages	*Science*	*Arts*	*Science*	*Arts*
70 or <	10	38	15	40
71- 80	35	37	40	30
80 or >	55	25	45	29
Total	100	100	100	100
	(Chi-Square=52.98611, p=0.00000)		(Chi-Square= 85.74298, p=0.00000)	

When students' averages in both grades in arts and in science were examined, controlling them for sex, differences were insignificant in most cases. Neither for males and females together, nor separately, did gender show any significant relation to students' averages. Only in grade 10 in arts, females reported higher averages than males; 27% of them, in contrast to 14% of the males, scored 80 or higher. (Chi -Square=14.88897, p=0.00058)

2.1.3 Overall Performance. Averages in grades 10 and 11 were further computed into a performance index, using the average 81% or higher as the cut off score. Accordingly, as illustrated in Table 10, students were grouped into four groups: those who performed well in grade 10 and maintained the same performance level in grade 11, those who showed a lower level, those who maintained a similar low level, and those who improved their level.

As shown earlier, streaming seemed to have a major effect on students' achievement and performance. Consistent with the above finding, stream, but not gender, was a

Table 10 Performance Level by Stream, by Sex by Stream, by Stream by Sex
(Percentages of Stream and Sex Categories)

Performance	*by Stream*		*by Sex by Stream*				*by Stream by Sex*			
	S	*A*	*MS*	*MA*	*FS*	*FA*	*SM*	*SF*	*AM*	*AF*
1 Stayed good	48	16	53	19	43	20	53	43	10	21
2 Got lower	23	5	19	4	28	6	19	28	4	6
3 Stayed weak	27	67	26	71	27	64	26	27	71	64
4 Got better	2	12	2	9	2	9	2	2	15	8.7

(Chi-Square=15.39837, p= 0.00151)

determining factor, showing that science students achieved a better performance level than arts students. Again the only exception where gender differences were significant was among students in the arts stream; females showed a higher performance level than males.

This consistent finding of a strong relationship between averages/overall performance and stream, with students in science achieving a higher performance level than students in arts, and with female students in arts performing better than males in the same stream, suggests that science in the Palestinian context is more highly valued than arts. Thus it receives more attention in the educational system. In addition, such a phenomenon seems to be related to future career options. Males are prepared to go into academic scientific professions, such as medicine, engineering, and pharmacy. Consequently, at the end of 10th grade, male students with a higher performance level go into science and maintain this level in grade 11; 10th graders with a lower performance level go into arts and maintain the same performance level.

On the other hand, female students showed a higher performance level than their female counterparts in the arts stream; and female students in arts also performed better than their male counterparts in the same stream. The latter finding suggests that due to preparation for more limited career opportunities, female students with high performance do not necessarily go into the science stream but may also, and more frequently than males, go into arts by choice. This argument was further supported when the impact of streams on the students' level of motivation and the factors affecting motivation was examined.

2.2 Level of Motivation. Here, motivation, the second component characterizing students' academic status, refers to their " enthusiasm for studies and interest in schooling." The findings showed that the majority (51%) of the surveyed students rated their interest as average, 46% as high and 3.4% as low. In terms of gender differences, there seemed to be no relation between the students' motivation and their sex; again in this context, stream seemed to be significantly related. As shown by the figures in Table 11, 60 percent of the students in the science stream, rated themselves as highly motivated while about

Table 11 Motivation Level by Stream
(Percentages of Stream Category)

Motivation Level	*Stream*	
	Arts	*Science*
High	37	60
Average	60	37
Low	3.4	3.3
Total	100.4	100.3

Chi-square 45.12158 = p.00000

40 percent rated it as average. Arts students, on the other hand, ranked themselves by similar proportions but in a reversed order.

To investigate the factors contributing to students' low/average motivation, the students were asked to give their own explanation of the matter, of whether it was related to school (curriculum, teaching methods or attitudes), to their chances for higher education, to their family, and/or their involvement in matters outside school? Figures displayed in Table 12 present some answers.

Table 12 Factors Affecting Students' Low/Average Level of Motivation
(Percentages of All Students Category, of Sex Category, and of Stream Category)

	Curri-culum	*teaching methods*	*school discouraging*	*busy in other things*	*goal not education*	*low chance in HE*	*family discouraging*	*others*
All Students	17	7	2	9	3	10	2.4	2.1
Sex								
Female	19	7	1	6	2	10	3	3
Male	15.5	8	3	12	4	10	2	2
Stream								
Arts	20	7	2.5	11	5	14	3	3
Science	13	7	1.5	7	1	5	2	1.5

The percentages in Table 12 represent students' single choices of factors affecting their motivation; the category "others" represents around ten different choices. As indicated in Table 12, in the all-student category, school-related factors, such as teachers and administrators' attitudes and practices, occupied the highest percentage among students' choices, a total of 26%: curriculum formed 17 percent, teaching methods 7% and 2% for the factor "school being discouraging". This proportion would still rise if the combined choices were added, as the majority included at least one school-related factor. The two other factors reported were: first, "being busy in non-academic matters and uninterested in education in general", and second, "having low chances in obtaining higher education"

combined with "the family being discouraging"; each of the two factors accounted for about 12% of the answers.

Students responses controlled by stream showed that about 30% of the students in science, compared with 22% of of the students in the arts, reported they were negatively affected by school-related matters; 17% of the students in science, contrasted with 7% of those in the arts, felt they had poor chances in higher education and that their family was discouraging; and 16% reported they were busy in non-academic matters and their goal was not education.

Disaggregating factors affecting students' low/average level of motivation from a gender perspective, the findings show that 16% of the males reported disinterest in education in general and interest in non-academic matters; in contrast, only 8% of the females reported this factor as the one causing their low/average level of motivation. However, almost equal percentages of females and males felt dissatisfied with school-related matters, the curriculum, the teaching methods, and the school's attitude towards them and their interest in their studies. Finally, 13% of the females compared with 12% of the males reported that they saw low chances in attaining higher education and that their family was discouraging them from giving their studies proper attention.

To uncover what affects students' selection of the factors contributing to their low/average motivation, this variable was computed and recoded as school-related reasons, low opportunity for higher education and family, and disinterest in education or involvement in non-academic matters, as demonstrated in Table 13. When controlled for stream, the relation seemed insignificant to this variable. However, when controlled for sex, differences between male and female responses seemed to be significant. More females than males were dissatisfied with school-related matters and more males saw they had poor chances for higher education; in contrast, more males than females reported they were disinterested in education and were busy in non academic matters.

Such a finding suggests an important dichotomy between the perceptions of males and females. They appeared to be surrounded by different worlds. That more females than males felt that school, in specific, was dissatisfactory to them and that they had low chances for continuing their education reflects that they perceived their boundaries as limited. Males' responses, on the other hand, suggest that they perceived themselves

Table 13 Reasons for Low/Ave Motivation by Sex and by Stream
(Percentages of Males and Females)

Reasons	*Sex*	
	M	*F*
School-related	49	57
Low chance in HE	21	26
Busy in non-acad.	30	17

(Chi-square 9.58736 = p.00828)

living in a broader circle: if they did not choose to study, most probably they would have other choices. Their dissatisfaction, as they saw it, was not limited to school but to education in general. Thus the dichotomy between males and females was reflected in a wider circle of choices for males and a more limited one for females.

2.3 Work Along With Studies.

Although being involved in paid work while studying at school was not expected to be a usual practice for high school students in Palestine, we chose to explore this area to see if any tendency for that could be detected, and if working was a characteristic of the most unmotivated and/or the most economically disadvantaged students. In addition, we were interested to see if, as has been assumed of Palestinian society, family members were expected to assist in family businesses or enterprises.

Surprisingly, the results showed that 15 percent of the surveyed students were engaged in paid work, of whom two-thirds worked regularly. However as expected, students were more involved in assisting in a family enterprise if their family ran such an enterprise. Of the total surveyed population, 43% reported that their families owned an agricultural or commercial enterprise, of whom about 31 percent assisted in it, 11 percent worked regularly and 9 percent occasionally. The majority of working students did up to five hours of work per week.

Figures in Table 14 represent the percentages of male and female working students, involved in paid work or in work with the family enterprise. These figures show major gender differences in favor of males. There seemed to be more male workers in both kinds of work; about 34% of male students worked either regularly or irregularly in return for pay, and 31% of them reported assisting regularly or occasionally in their family enterprise. In contrast, the number of females who reported involvement in waged work regularly or occasionally formed a little less than 4 percent while those who reported being involved in assisting in family business formed 9%.

These data may indicate that perhaps due to certain socio-economic reasons, more secondary male students tended to seek work along with their studies. The findings on females tend to reflect the pattern that women are more confined to domestic work, rather

Table 14 Students' Regular / Irregular Work by Type
(Total Percentages of Paid Work and Work With Family Categories)

Answers	*Paid Work*		*Work with Family*	
	Female	*Male*	*Female*	*Male*
Yes Regularly	1	9	4	18
No	97	66	13	11
Yes Irregularly	3	25	5	13
Don't Know	0	0	77	57
Total	100	100	102	100

than seeking work in return for payment. Their engagement in helping the family out in its private enterprise, which is not considered work by the prevailing social or economic standards, reflects an extension of their reproductive/domestic role, a role which is not only accepted by Palestinian standards, but also expected of women. Investigating the relation between students' averages and their stream and their involvement in work, the two relations were insignificant.

2.4 Parental Background

To identify the kind of family environment the surveyed students were raised in, we looked at the educational level their parents attained and the kind of profession or employment they had. The results are presented in Table 15 and Table 16 below.

2.4.1 Parental Education. Parental educational patterns appeared to show important differences between mothers and fathers. As expected and as known, mothers were at a disadvantage in terms of the educational level they attained. Illiteracy rates among mothers are double those among fathers; in contrast, higher education (i.e. an educational level ranging from completing community college education to holding an MA degree or higher) rates among fathers were double the rates among mothers.

Table 15 displays the educational level parents attained. In total, we found that the majority of mothers and of fathers completed basic education (up to grade 9). Differences in educational level, however, were apparent in levels beyond basic education. Twenty of the mothers were illiterate, 18% finished secondary education and 8% higher education. In contrast, 10% of the fathers were illiterate, 22% completed secondary education and 20% higher education.

The data suggest that since these mothers were not expected to seek employment, attaining basic education was considered sufficient for them to play their reproductive role of raising the children and doing domestic work; investment in education, therefore, seemed to have been in favor of fathers. This suggestion proved more relevant when we compared their employment patterns, as illustrated below.

Table 15 Parental Education
(Numbers / Total Percent of Respondents)

Education Level	*Mothers*		*Fathers*	
	No.	%	*No.*	%
Illiterate	169	20	80	10
up to 9	449	54	400	48
Secondary/Vocational	152	18	186	22
Higher Education	65	8	170	20
Total	835	100	836	100

2.4.2 Parental Employment. Typical of employment patterns in Palestinian society, the results revealed that formal labor opportunities were dominated by males; the majority of women were involved in domestic work, while those who did formal work constituted a low percentage of the labor force. Looking at the employment patterns of parents in the study population, we found that the vast majority of mothers were unemployed and those who were employed were concentrated in a limited range of jobs. In contrast, the majority of fathers were employed, occupying a wider range of jobs.

Table 16 below shows the distribution of fathers and mothers by employment. Of a total of 853 respondents, 838 reported about their mothers' employment status and 841 about their fathers'. The vast majority of mothers (89%) were unemployed; the remaining 11% were distributed over a number of categories as displayed in Table 16. The categories were employees, professionals, small business owners and "others". Of the 46 employees, 35 were teachers, 2 nurses, 4 security police and 4 were not specified; the category "others" included only dressmakers. In contrast, of a total of 841 fathers, 9% were unemployed; the rest were distributed mainly over four categories: workers, employees, business persons, and owners of small businesses.

Employees among fathers amounted to 172, which was about four times larger than that among mothers; they included 81 employees whose jobs were unspecified, 65 teachers, 16 police and security, 7 nurses and 4 directors general in PNA ministries; the category "others" included 41 drivers and 11 tailors.

Thus, findings on parental education and employment showed that the majority of mothers and fathers completed up to 9 years of schooling; the proportion of illiterate mothers was double that of fathers, and the proportion of those who completed higher education was less than half of that of fathers. In terms of employment, job distribution among mothers and fathers reflected the gendered division of labor. Mothers were either housewives, or mainly teachers or dressmakers; in contrast, fathers occupied a wider range of jobs.

Table 16 Distribution of Parents by Employment
(Numbers and total percentages of all respondents)

Employment	*Fathers*		*Mothers*	
	Number	*Percent*	*Number*	*Percent*
workers	198	23.5	8	1
employees	172	20.5	46	5.6
businessperson	161	19.1	3	.4
small business	105	12.5	6	.7
farmers	42	5	3	.4
Professionals	31	4	10	1.2
others	53	6.3	15	1.8
unemployed	79	9.4	747	89.1
Total	841	100	838	100

An interesting finding that showed relevance to parental education and employment was the patterns reflected in the surveyed students' marital status and in their involvement in work. As reported above more females than males were engaged to be married and those who were married were only females; more males than females were involved in paid work; females' involvement in work was more limited to the family enterprise level. This finding coincides with the gender division of labor reflected in the parental education and employment background of the surveyed students.

Since the majority of parents have not attained higher education and do not have jobs that are socially or culturally considered prestigious, it was expected that they create conditions for their children that affect their choices in the direction of higher education and particularly academic education. However, when this assumption was tested to see if students' choice between academic and vocational education was controlled by the education or work of their parents, the results showed insignificant relations. A possible interpretation of this insignificant relation is a well-known fact about the value Palestinians ascribe to education as a source of security and attainment of social prestige. This assumption seems to emerge from a circle beyond the family boundaries, which forms the students' immediate social environment. As we shall see later, students' choices between academic and vocational education appeared to be affected by factors such as gender, streaming and academic achievement at school rather than parental education or occupation; regardless of whether their parents were highly educated or not, had high status professions or not, the majority of students reported that they wanted to go into academic higher education and not vocational education.

2.5. Summary

The data on demographic features and on schooling and the world of work revealed the following findings, all of which were statistically significant.

Academic Status

- In both grades 10 and 11, students in the science stream obtained higher averages, showed better overall performance, and higher motivation than students in arts:

  1. 48% of the students in the science, contrasted with 16% in the arts, maintained a good performance level in grade 10 and 11. In contrast, 27% of the former group, contrasted with 67% of the latter, maintained a poor performance level.
  2. 60% of the students in the science stream, in contrast to 37% of those in the arts, reported that they were highly motivated.

- Female students in the science stream showed a higher level of performance than their female counterparts in the arts stream: 71% of the former group contrasted with 27% of the latter, obtained an average of 80 percent or higher.

- Female students in the arts stream did better than their male counterparts in the same stream: 27% of the females, contrasted with 14% of the males, obtained an average of 80% or higher, and 38% of the females, contrasted with 51% of the males, got an average of 70% or lower.

- Three main reasons underlying students' low/average motivation level were school-related matters, such as the teachers' and administrators' attitudes and the school facilities, their dissatisfaction with the curricula and their engagement in non-academic matters, such as work, family matters and activities outside school. Differences showed the following:

  1. 30% of all male students, in contrast with 17% of the females, reported that their low/average motivation was due to their engagement in non-academic matters.
  2. 57% of the female students, in contrast with 49% of the males, perceived school-related matters and dissatisfaction with the curricula as the main factors underlying their low /average motivation.

Involvement in Work and Parental Background

- Surprisingly, 15% of the surveyed students reported they were engaged either regularly or occasionally in paid work or in the family businesses or enterprises:

  1. 34% of the males, in contrast to less than 4% of the females, were engaged in paid work; 31% of the males, in contrast to 9% of the females assisted family business.
  2. Female students who assisted the family in their businesses and enterprises formed 9%; in contrast, those who engaged in paid work formed about 4%.

- A large gap existed in the educational level of mothers and fathers and in their employment status as well:

  1. Illiteracy rates among the mothers was 20%; in contrast, it was 10% among the fathers. More fathers (20%) than mothers (8%) attained higher education.
  2. The vast majority of mothers (89%) were housewives while the vast majority of fathers (91%) were employed.
  3. Working mothers occupied a limited range of jobs, conventionally accepted as female jobs, related to reproduction and caretaking; fathers occupied a wider range of jobs, related to production and breadwinning.

The findings summarized above indicate the following:

1. The stream in which the surveyed students enrolled showed significant relation to their academic performance; in all cases, students in science showed better

performance than those in arts, reflecting a bias against students in arts, created by the system of streaming.

2. Gender differences were reflected in the reasons identified by the students to explain their low/average performance. Due to their limited circle of contact, the main complaints female students perceived were related to school and the curricula; in contrast, having a wider range of contacts, male students reported reasons outside the academic boundaries, like work and family engagements.
3. Students' engagement in work and the educational and employment status of their parents reflected a pattern of gendered roles and gendered division of labor. In fact, these findings reflected a dichotomy between male and female worlds: the males dominate the public world, the world of education and work, which identifies them as producers, wage-earners, and possibly as thinkers; the females are limited to the private world, the domestic world, which identifies their role as biological reproducers, caretakers and nurturers.

Parenthood is defined by gender roles and relations based on the gender division of labor and gender divided practice. In the family environment, children observe, learn and internalize the gendered relationships in the family. In the Palestinian context, the data analyzed above showed prevalent patterns of gender roles of men and women as reflected in parenthood; male parenthood means breadwinning work while female parenthood means mothering and domestic work.

Schooling usually plays a significant role in shaping students' perceptions of their roles and in determining their future opportunities. In schools students are prepared for future roles, through access to curricula, such as access to the sciences or the humanities, and through "hidden curricula", that is, teachers' and administrators' attitudes, practices and responses to students. Accordingly, students develop perceptions of future opportunities and particularly of those accessible to them. In the Palestinian context, and as revealed by the data, the role of schooling seems to be reflected in streaming; science is perceived to be more valuable than arts, and to be opening more future opportunities, especially for males, in both education and employment. Streaming was revealed to have an impact on students perceptions and on the family's perceptions of future opportunities available for them. Thus, based on the prevalent perceptions of gender roles and gender division of labor, investment in the education of children is expected to be channeled mainly in favor of males in the family to help them gain employment and future security as breadwinners. Expected to play a reproductive and caretaking role, females seemed to be channeled into private and domestic shadows. The suggested analysis is further proved by the findings presented in later sections.

C. THEME 3: Knowledge of VETT Provisions and Services

It is assumed here that access to resources of knowledge and information increases students' opportunities. The broader their knowledge is about available institutions, fields

of specialization, job opportunities, the greater their opportunities are for appropriate choices. Our earlier findings, as stated in Part I of this study, showed that the role of community colleges in Palestine in disseminating information to promote VETT, and particularly in providing career guidance and acquainting the students with VETT provisions, is close to non-existent.

During interviews with the deans, directors and three registrars of twelve community colleges, one of the questions we raised was how they reached their target groups to promote their provisions of VETT. Their responses showed that they had no systematic or structured ways of attracting the target groups or informing them of their programs; nor did they have any official career guidance programs. Their only exerted effort, in this direction, was putting out brief advertisements about their programs in the local papers a few weeks before registration, and giving some counseling to applicants during registration. Some deans and directors mentioned that they relied on their reputation for giving good services and on the performance of their graduates at the institutions that employed them. The only college that reported of using strategies and developing techniques to reach out to the target population was UNRWA Ramallah Women's Training Center (RWTC).

In light of the inadequacy of VETT providers in developing strategies and techniques to promote VETT, a few questions are posed here: Does the school system encode any beliefs, attitudes or practices through which students are socialized and channeled? What are the sources from which students draw their information and how they formulate their assumptions about the available education and employment opportunities? Are there any gender differences between males and females in terms of access to information sources and the assumptions they make regarding available choices?

In trying to assess the amount of knowledge which students had access to regarding VETT institutions and provisions in Palestine, we explored their knowledge of and awareness of VETT institutions, provisions and services through six questions. First, they were given a list of 40 areas of specialization[25] offered at the different local community colleges and were asked to label them with "yes" if they knew the fields were offered, with "no" if they thought the fields were not offered and with "don't know" if they did not know. Second, they were asked to mention the source of information they depended on to label these fields. Third, they were asked if they knew of official sources giving information about VETT, and if so, how these sources spread the information. Finally, they were asked if there was a need for formal sources to inform them about VETT, and if so, to give suggestions as to where these sources should be located.

The findings revealed that, on the whole, the surveyed students had poor knowledge of VETT and its provisions. Those who showed some knowledge, by and large, obtained it from informal sources like family, friends, and previous graduates. The role of schools and community colleges in reaching out to their potential target groups was found to be extremely minimal. The majority of the surveyed students felt there was a need for formal sources to provide information on VETT, and that school has to be the first institution that ought to play a major role in providing this service.

3.1 Fields of Specialization[26]: Gender Differences

Table 6 in appendix 2 presents students' knowledge and awareness of the existence of 40 fields of specialization separated by sex. A reading of this table shows that out of the 40 fields, students were most aware of nine only, (i.e. with more than 50 percent of the students claiming to know of them). These were in the following rank order: nursing, accounting and business administration, computer (programming), child education, radio and TV maintenance, general secretary, auto mechanics, shari'a, and physical education. The fields that the students were least aware of (i.e. with less than 20% of them claiming to know of) were agricultural mechanics, hotel management, library science and legal services.

Gender Differences. Controlling for sex, we found significant differences between males and female level of knowledge of the fields. Except for a few cases, the results revealed that males showed more knowledge of the existence of the fields than females, regardless of whether the amount of this knowledge was relatively high or relatively low for both sexes combined.

Table 17 below presents all significant differences between male and female responses. For instance, of the nine fields which over 50% of the students have heard of, girls showed more knowledge than boys in "nursing" and "child education" ; in contrast, boys showed more knowledge of the remaining seven fields. Looking at all the fields that showed significant gender differences, amounting to 23 in total, boys' knowledge of these fields was three times higher than that of girls. The fields that girls were more aware of than boys were restricted to six: child education, nursing, nutrition, dress making and dress design, interior design, and ceramics; in contrast, boys showed more knowledge of 17 fields representing a broader variety of specialization. In other words, overall males had a greater spectrum of knowledge concerning study opportunities which is eventually expected to access to work oppotunities, whereas girls were aware of areas limited to the "feminine" choices and professions.

The knowledge of the surveyed students of the existing fields clearly suggests that male and female students saw certain fields of specialization as "gendered" with the highest range of opportunities accessible to males. This gendered perception in our case emerged out of the language used to define the professions rather than out of students' knowledge of the nature of the fields, that is, their objectives, content and expected output. When we examined the language used in naming certain fields and the students' gendered classification of those fields, we found that the their knowledge of the field was more affected by its title rather than by what it involved.

Taking two fields, "computer" and "computer programming", for illustration, we found that more students claimed they were aware of the field "computer" than of "computer programming", the ratio was 57% to 27%. During interviews with the directors of community colleges, we requested a clarification on the difference between the two fields. Surprisingly, we discovered that they were identical in the nature of their objectives and content; however, they carried different titles at different colleges. What seemed to have accounted for the difference in the students' level of awareness of the two fields was

Table 17 Knowledge of Fields of Specialization by Sex Category – Percentages of the "Yes" Category

Profession	*% of those answering "yes"*			*Significance Level for Sex Differences in Responses*
	% of of Females	*% of Males*	*% of Both M&F*	
Pharmacy	31	41	36	Chi-Square= 8.80846, p=0.003
Accounting /Business Administration	56	65	60	Chi-Square=6.68234, p=.0097
Imama and Wa'ath	19	25	22	Chi-Square=4.26254, p=.039
Legal Services	15	26	20	Chi-Square=13.23471, p=.00027
Qur'an	41	51	46	Chi-Square=8.50645, p=.000354
Surveying	23	37	30	Chi-Square=27.62975, p=.00000
Architectural Drawing	27	44	34	Chi-Square=27.91913, p=.00000
Radio & TV Maintenance	46	65	55	Chi-Square=28.87302, p=.00000
Shari'a	48	58	53	Chi-Square=8.22896, p=.00412
Nutrition	31	19	25	Chi-Square=14.51842, p=.00014
Child Education	66	47	57	Chi-Square=25.95540, p=.00000
Interior Design	48	39	47	Chi-Square=6.72175, p=.00952
Ceramics	46	35	40	Chi-Square=9.58093, p=.00197
Radio & TV Technician	25	40	32	Chi-Square=21.20972, p=.00000
Medical Equipment Maintenance	7	12	9	Chi-Square=5.16789, p=0.02
Nursing	68	60	64	Chi-Square=4.77926, p=.0288
Banking & Finance	17	28	22	Chi-Square=12.68137, p=.00037
Landscaping	23	36	29	Chi-Square=16.73818, p=.00004
Auto Mechanics	45	63	54	Chi-Square=24.72729, p=.00000
Air-conditioning & Heating	30	50	40	Chi-Square=31.96474, p=.00000
Dress Making & Design	48	39	44	Chi-Square=5.91798, p=.01499
Agricultural Production	22	36	29	Chi-Square=16.51387, p=.00005
Agricultural Mechanics	13	20	16	Chi-Square=8.17282, p=.00425

the title that they each carried rather than the content or the work opportunities to which they gave access. This suggests that if students' responses represented their actual knowledge of the existence of the two fields, their knowledge was to a large extent limited to their hearing of the fields' names rather than of what they actually entailed.

This suggestion was supported further when we compared students' knowledge of two other fields, "dressmaking and design" and "landscaping". The literal English translations of the Arabic titles of these fields were: "fashion design and clothes manufacture" and "Land engineering and organization". Examining the language used in the naming of these fields, we found that students' lack of knowledge and their unawareness of what kind of profession such fields prepared them for might have affected their answers. Considering " designing, sewing or making clothes" a female trade, and associating "manufacture, engineering, organization and land" with males has been a long tradition in Palestinian society. The students' reaction to this field, "dressmaking and

design", showed that more girls (48%) than boys (39%) were aware of its existence. Although the title of the field included the word "manufacture", its effect on the perceptions of students was weaker than the effects that words like "dress, clothes and fashion design" had on their perception. in fact, what seemed to have affected their perception was the association of "dressmaking" with women rather than what knowledge or skills it offered.

By the same token, students' knowledge of the second field "landscaping" or literally "land engineering and organization" seemed to have been affected by the mere words that constituted the title of the field rather than of what it entailed. The figures showed that more boys (36%) than girls (23%) claimed awareness of the existence of the field. Apparently students perceived the field as one involving machinery and technology and requiring going out to the field. However, what we found out when we asked for clarification on its nature was different from what the students might have assumed, which reflects their lack of knowledge and awareness of VETT fields and provisions.

In an interview with the Dean of Khadoury Palestinian Technical College[27], Dr. Adnan Sleih, he explained that the field "landscaping" was not approached by female students at the college and that very few male students were interested in exploring it. He added that he was surprised to see such a reaction on behalf of female students especially that the field involved a study of the soil and plant environment. That is most of the tasks students were required to be trained in were office-oriented and not field-oriented. He commented that the field involved knowledge and skills that would give access to jobs appropriate for men as well as for women.

During an interview with the Dean and Program Coordinators at the Polytechnic Community College[28] in Hebron, they discussed some of the problems they faced in enrolment in certain fields, particularly female enrolment. In one of the fields "dressmaking and design", they added, female enrolment shocked them. They explained that when they launched the field "dressmaking and design", their objective was to give women an opportunity to own a small enterprise rather than to prepare them to be workers in a sewing factory, since the field was designed to develop in the trainers higher level skills than just cutting patterns and sewing clothes. However, contrary to their expectations, male enrollment was much higher than female enrollment; they added that they themselves could not explain the phenomenon.

The two cases at Khadoury and the Polytechnic community colleges may be explained in terms of the target group's lack of knowledge of available and accessible opportunities. Shortage in enrollment, be it male or female enrollment or both, reflected that the target groups were ignorant of the content of the field; their expectations of what it would prepare them for misled them. Most probably, they were guided by traditional perceptions of their roles and by what the titles "dressmaking and design" and "landscaping" meant to them in light of their assumptions and perceptions. Apparently, to their knowledge, "dressmaking and design" indicated " a female profession" while "landscaping" indicated a "male profession". Certainly, when students did not choose the field landscaping, they were unaware of its contents or to the opportunities to which they would gain access.

Thus what is meant by student awareness of the existence of the field, in reality, does not go beyond hearing its name, a limited knowledge of what it involves, and most important of all that it is based on students' assumptions and perceptions of what is "male" or "female" profession regardless of what it prepares them for.

3.2 Sources of Information on VETT: Actual and Expected Sources

The following section presents an analysis of the data obtained on VETT sources of information, and of the significant differences in the responses of students determined by their sex, region, stream and locality.

3.2.1 Actual Sources: Gender and Regional Differences. The findings reported in the previous section showed that students' knowledge of available opportunities through formal sources was limited. The findings reported below suggest that this limitation seemed to be compensated by reliance on informal sources. Having classified the above fields into what they believed was being offered or was not being offered at the different community colleges, students were asked to mention the source of information on which they based their classification of the fields.

- As shown in figure 7, the data revealed that 41 percent of the total number of respondents obtained their information from informal sources like family, friends and previous graduates; 11 percent derived it from newspapers, 9 percent from school, 5 percent from community colleges and 34 percent from mixed sources. In most cases, whenever students made a choice of mixed sources, family, friends and previous graduates as well were a component of the responses showing two combinations or more.

This finding which revealed that the majority of students' actual VETT sources were informal sources triggered an interest in looking at differences among in the responses of students. Controlling their responses for sex, stream and region showed significant relations to what they claimed to be their sources of information on VETT. Table 18 below

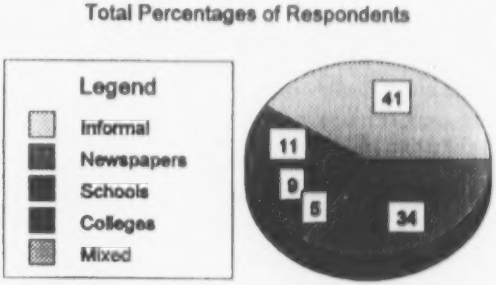

Figure 7 Students' Actual VETT Sources

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demonstrates gender differences: more females than males derived their information on VETT from informal sources and newspapers while males had a wider variety of mixed sources and were more reached by community colleges and schools.

- Of the total female respondents, 47% depended on informal sources while 35% of all male respondents depended on the same source. On the other hand, 9% more male students than female students derived their information from mixed sources.

Such differences again confirm the dichotomy between the private and the public spheres which seem to construct the attitudes and perceptions of male and female students.

Table 18 Students' Actual VETT Sources by Sex
(Total Percentages of Sexes)

SEX	*Students' Actual VETT Sources*					*Total*
	Informal	*School*	*Newspapers*	*Community Colleges*	*Mixed*	
Females	47	8	11	3	30	100
Males	35	9	10	6	39	100

Chi-Square=14.93996, p=0.00483

Responses of students in the science and arts streams displayed in Table 19 indicate that a significantly higher percentage of students in science obtained their information from informal sources and from school, whereas a larger percentage of those in arts obtained it from mixed sources, newspapers and community colleges.

- Of the total student population enrolled in the arts stream, 39% depended on mixed sources whereas 27% of those enrolled in science reached the same source.
- Of all students 50% of all students in the science stream derived their information from informal sources while only 36% of those in arts depended on the same source.

Table 19 Students' Actual VETT Sources by Stream
(Total Percentages of Streams)

STREAM	*Students' Actual VETT Sources*					*Total*
	Informal	*School*	*Newspapers*	*Colleges*	*Mixed*	
Arts	36	7	12	6	39	100
Science	50	11	8	3	27	100

Chi-Square=21.14972, p=0.00030

Finally, looking at regional differences presented in Table 20, we found that a larger percentage of students from the center than from other regions reported that they obtained their information from school, newspapers and informal sources; the largest portion of students who relied on mixed sources came from the north, and the largest percentage of the students that were reached by community colleges came from the south.

Table 20 Students' Actual VETT Sources by Region
(Total Percentages of Regions)

REGION	*Students' Actual VETT Sources*					*Total*
	Informal	*School*	*Newspapers*	*Community Colleges*	*Mixed*	
South	37	9	11	8	35	100
North	36	4	9	1	49	100
Center	49	11	11	4	25	100

Chi-Square=34.97662, p=0.00003

What do these differences suggest?

Differences in male and female student responses suggest a general gendered pattern. They indicate that girls are more limited to the private world; their information sources were more informal and their knowledge was confined to fields related to the private sphere. Boys, in contrast, although they also showed limited knowledge of the fields and depended more on informal sources, seemed to have a larger scope of knowledge and a wider range of information sources from both formal and mixed sources. In fact, twice as many males as females claimed they were reached by community colleges.

As mentioned earlier, the data showed that streaming had a major effect on students' choices and life opportunities. The differences expressed by the figures in Table 19 suggest that more art students than science students seemed to be channeled into community colleges. Thus, they were reached more by community colleges as they seemed to have less chances of joining the universities. Science students, however, seemed to perceive more flexibility; they saw they could choose to join a university or a community college; they also claimed they were targeted by community colleges as much as arts students.

Regional differences suggest that the central region seemed to be more developed and better resourced to provide students with information on VETT than the other regions. In fact, this finding was not surprising because universities and community colleges are concentrated in the central region. In the south, however, students seemed to find gaining access to information from community colleges easier. This could indicate either a closer relationship between schools and community colleges, or that the school system in the south exerted more efforts in informing the students, either directly or indirectly, of VETT opportunities. The latter suggestion seemed to be more likely when the results on

students' knowledge of the availability of formal sources of information on VETT were considered. Although we were aware of the limited formal sources of information accessible to VETT target groups, including high school students, we were interested in examining what they themselves perceived of this matter.

3.2.2 Formal Sources of Information on VETT.

- **Availability of Formal Sources.** As expected, the findings showed that of the total number of respondents, 71 percent claimed that formal sources were not available, 23 percent said they were, and around 6 percent gave no answer. Although the percentage of those who confirmed the presence of formal sources did not reach one quarter of the total, there were significant differences between the answers of males and females. Male students who confirmed the availability of formal sources were twice as many as female students, 32%of males contrasted with 17% of females. (Chi-Square=25.31826, p=0.00000)

This finding coincides with the gender differences found in the responses of students regarding their interpretation of what affected their level of motivation and their interest in school work. Responses of female students seem to reflect a narrower social environment than that of male students: females are more confined to the private world while males have wider openings to the public world. When controlling this variable for stream, region and locality, however, we found that none was significantly related to differences in students' awareness of available formal sources of information on VETT.

- **How Are Formal Sources Provided?** The respondents claimed that sources provided them with information on VETT through two sources: textbooks and lectures at school, and pamphlets and newsletters from community colleges. The majority (59%) claimed that their main source was community colleges, 31% said school, 5% claimed mixed[29] sources. When students' answers were cross tabulated with sex, stream, locale and region we found that regional differences were the only significant differences among the responses.

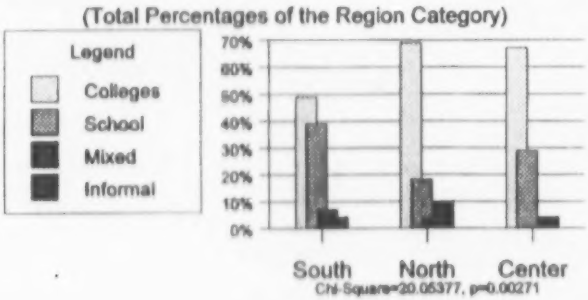

Figure 8 Awareness of Available Official Sources

Figure 8 illustrates that the responses of students varied with the region they came from. Unlike the majority of students, less than 50% of southern students reported that community colleges were their formal source of information on VETT, about 40% reported that school was their source, and 7% reported mixed sources. In contrast, northern and central students were more in favor of schools than of community colleges.

As indicated by earlier findings in the study, southern students in the survey were significantly different from students from the other two regions. Although their responses reflected that their major source of information was community colleges, students from the north and the center were more reached by the colleges. A reasonable interpretation of such a phenomenon is that the majority of community colleges in Palestine are located in the central region; being more in contact with the center, northern students were not as negatively affected as southern students. Due to the latest political developments in the Palestinian-Israeli conflict, the southern region of the West Bank is becoming more and more detached and distant from the rest of the West Bank. It has also been neglected when development planning is considered, especially if we consider the maldistribution of wealth and resources: the flow of funding from international donors is being invested in the central region.

In addition, the results also showed that while the link community colleges had with students from the south became weaker, the role schools played in providing southern students with information on VETT was maintained. In this context, one observation ought to be mentioned. During our meeting with the principal of Hebron Secondary Girls' School in the south at the time of the survey, she enumerated extra-curricular activities carried out at school and outlined her future plans for the school.[30] The plans that she had made included raising funds to lay the infrastructure for establishing a nursing stream at the secondary level in her school. She emphasized the need for that and its appropriateness for girls and the area itself. She added that nursing at the secondary level was offered by only one other school in the region and that it would be very useful to have another school offering vocational education in nursing, since nursing was one of the market needs.

The briefing gave us the impression of the extent of the involvement of certain school administrations in the future of their students. However, at this point, we cannot conclude that such a case was representative of practices and attitudes of school staff and administrators in the West Bank. To generalize the finding, it is recommended to carry out a more thorough study of what happens in schools through longer observation sessions of the process of schooling, and through extended semi-structured interviews with teachers and administrators. But we can certainly claim that the case of this school principal in the south reflects the effect of creative and committed individuals who can make a difference in the educational system and contribute to the development of society. Being aware of the needs of the area and of the necessity of launching activities that would develop students' abilities, and particularly those of females, individuals as such would present good models for promoting education and effecting changes in schools.

The findings and discussion presented above showed that the role schools, colleges

and other structures played in promoting students' knowledge of education opportunities in general, and VETT in particular, had been inadequate. In addition, gender differences in students' knowledge of available opportunities reflected a gendered society and a gender biased system. Not only did community colleges not provide information, but they also reinforced existing biases in society. If male and female students, for instance, became aware that "computer" and "computer programming" were in fact identical, or if they learnt what a field like "landscape" meant or involved, it would be more likely that they would have made different choices and would have thus perceived different opportunities. One of the roles educational institutions are expected to play is to provide students with knowledge of opportunities and give them career guidance. Indeed, they ought to work towards bringing about changes that would access to equal opportunities and eliminate societal biases.

3.2.3 Expected Sources: Needs and Suggestions

How do students feel about the need for official bodies that would disseminate information on VETT? Knowing that formal sources of information on VETT were scarce and expecting that whatever information students had access to came mainly from informal sources, we posed the question whether the students saw the shortage and felt the need for such sources of information.

3.2.3.1 Need for Formal Sources: Stream and Regional Differences

- Of all students, 79% confirmed the need for such a service, 3% reported they did not need it, and 18 % did not know if they needed it. Controlling students' responses for sex, stream, locale and region, neither sex nor locale were significantly related.

However, stream differences and regional differences seemed to be highly significant. Stream differences reinforce the role schools have been playing to this effect.

Figures displayed in Table 21 demonstrate significant differences between arts and science students. More science students than arts reported they needed the service and fewer of them said they did not know if they needed it or not. In addition, the figures

Table 21 Need for Formal VETT Sources by Stream and by Region
(Total Percentages of Stream and of Region)

Answer	*Stream*		*Region*		
	Arts	*Science*	*South*	*North*	*Center*
Yes	74	87	73	83	84
No	3	4	4	3	3
DNK	23	9	23	14	13
Total	100	100	100	100	100

Stream (Chi-Square=25.18329, p=0.00000)
Region (Chi-Square=15.24538, p=0.00422)

show that regional differences were also apparent, indicating that students from the south were less interested in this service; 73% of them, contrasted with 83% of students from the north and 84% from the center, reported they needed such a service. The proportion of southern students of all those who said they did not know was almost double that of northern and central students.

The differences presented above suggest that both students in the arts and students from the south are deprived groups. They did not have the same opportunities that were open to science students and central or northern students. Although the results showed that more arts students received their information on VETT from schools and colleges, they did not seem to see the importance of such a service. What probably caused their disinterest in getting more formal information on VETT was their perception of this kind of education. They seemed to be aware of the status VETT occupied in comparison with university education: in Palestinian society, VETT has not generally been seen as higher education. So, students refused it and were not interested in learning more about it.

Regional differences reflected that southern students also formed a deprived group but of a nature different from that of the arts. Being physically detached from the center, southern students seemed to be more deprived than others of enjoying the benefits of the largest number of educational institutions and other commercial and media institutions, located in the center. Since VETT and other educational institutions have been almost non-functional in providing knowledge and information, physical distance of the south contributed to its being more deprived than other regions. This condition of the south is also in line with the claims that southern regions have been known for their being less developed socially and economically than either northern or southern regions. The differences that southern students showed in their responses to the need for formal sources of VETT may have been also due to possible access to other career options available in small businesses or in family enterprises. Earlier findings revealed that the highest number of students who reported that their family owned private business or enterprise were from the south.

3.2.3.2 Suggested Sources: Gender, Stream and Regional Differences

Students who believed that there was a need for official VETT sources were asked to suggest how such sources ought to be provided. The sources referred to were schools (i.e. through textbooks and lectures), special programs to be provided through centers, pamphlets, newsletters, radio and television programs, and mixed sources including a combination of different sources.

- As shown in figure 9, one third of all the respondents felt that schools should provide them with this service; over a quarter of them felt that it should be provided through specialized resource centers, special radio and TV programs, pamphlets and newsletters. Of the total, 15% said mixed sources and 22% reported they did not know what to suggest.[1] Controlling responses for sex, stream, region and locale, the results revealed that all, but locale showed significant relations to students' suggested formal sources.

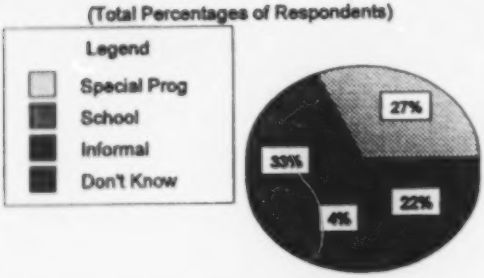

Figure 9 Suggested Formal Sources of Information

Table 22 below presents the data showing significant differences in the responses of students in relation to their sex, stream and region. As indicated by the figures in Table 22, stream, gender, and regional differences seemed to exist among students' responses; the weakest of all were gender differences and the strongest were regional differences. All students regardless of stream, gender or region ranked school as the first source that **should** provide them with information on VETT.

Table 22 Suggested Formal VETT Sources
(Percentages of Sex Category, Stream Category, and Region Category)

	Category Suggested Formal Sources					
	School School	Specialized Programs	Mixed Sources	Do Not Know	Informal Sources	Total
Males	30	27	15	23	6	101
Females	35	26	15	22	2	100
Significance of differences in responses of sexes Chi-Square = 20.68571, p = 0.00037						
Arts	30	25	14	27	4	100
Science	38	28	16	14	4	100
Significance of differences in responses of streams Chi-Square = 20.68571, p = 0.00037						
South	27	24	20	27	2	100
North	33	28	17	20	2	100
Center	40	28	8	19	5	100
Significance of differences in responses of regions Chi-Square = 32.10267, p = 0.00009						

Both males and females accounted for similar percentages in all options of suggested formal sources, except for " school". The significant difference was revealed in that 5% more of the female respondents suggested that "school " ought to take a more active role in providing them with information on VETT. This suggests that females possibly perceived school as a source " easier to access " than other "farther" sources like "specialized sources" which reconfirms their perception of their own conditions, those keeping them

limited to the private world or of their smaller circle which does not allow them enough mobility.

Responses of students in the arts stream and in the science stream revealed a significant difference in the choice "do not know ". In all the suggested source categories, the percentages of respondents were higher among the students in the science stream than among those in the arts. In addition, students in arts who claimed they did "not know" who should be responsible for providing formal VETT sources, were twice as many as the science students reporting the same choice. This finding suggests again that students in arts felt that they were less motivated, that they had less chances and had less access to information than students in science. This difference seems to arise from the fact that school did not give students in the arts stream the proper attention, care or support as it did for their peers in the science stream.

Differences in students' responses controlled by the region they came from showed that the highest percentage of students who opted for "school" as the first source of information on VETT were from the center, while those who opted for special programs were from the center and the north. In contrast, more southern students than others said they needed mixed sources or reported that they did "not know" where this service should be provided. Regional differences also indicate that the south was significantly different from the other two regions in that 7% more students from the south than from the north or the center said they did "not know" who should be responsible for providing such sources. This difference suggests a pattern similar to that revealed by results reported earlier in this study. Whenever the same variable was controlled for region, southern students seemed to be at a disadvantage when compared to students from the north or the center.

3.3. VETT Best Job Opportunities: Gender, Stream, Regional and Locale Differences.

The results pertaining to students' knowledge and awareness of available opportunities at VETT institutions were, as expected, limited and abstract. Consequently, their awareness of job opportunities would be expected to be even more minimal, especially when we consider that Palestinian economy has been controlled and underdeveloped for the past 30 years of Israeli occupation. For all these years, the structural linkage between the world of education, particularly higher education, and the world of work has been largely non-functional.

As mentioned in Part I of the study, interviews with community colleges revealed that by and large, their planning for and implementation of VETT programs had not been based on feasibility studies or assessment of market needs. Taking a student-centered approach, we investigated students' own assessment of the relation of VETT fields offered by the Palestinian community colleges to market needs. We were interested to uncover students' perceptions of and attitudes towards the professions and their relation to employment opportunities to try to understand whether the school system or students' wider social environments were related to their awareness of market opportunities. The

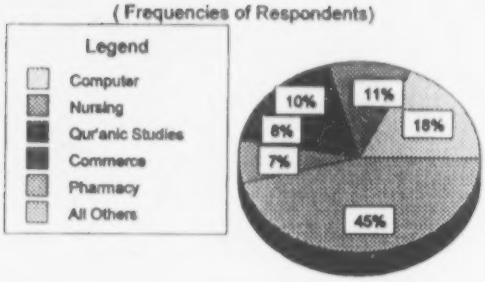

Figure 10 Fields Giving Best Job Opportunities

surveyed students were asked to choose three out of 40 fields of specialization, listed in the questionnaires, which they thought would give the best job opportunities. They were also required to rank the three fields according to priority. The survey revealed the following results:

- Figure 10 shows that the most frequently selected fields in rank order were computer, nursing, Islamic and Qur'anic studies, commerce, and pharmacy ; each of the other 35 remaining fields received less than 5% of the responses. To make the responses more meaningful and more manageable in investigating relations to other variables, the 35 fields were reclassified as "all others" and"other academic" fields.[32]

Tables 23-26 below demonstrate significant differences reflected in the students' responses, determined by their sex, stream, locality and region. Gender differences are represented by figures in Table 23 which show that twice as many females as males opted for nursing, and that more females, though by a minimal difference, opted for Qur'anic studies and pharmacy. In contrast, more males than females selected computer (programming) and commerce.

Stream differences displayed in Table 24 showed more significance than gender differences; they reflected a pattern in the choices of the respondents. Limited by their

Table 23 Choices of Fields Giving Best Work Opportunities
(Total Percentages of Sexes)

SEX	*Choices of Fields Giving Best Work Opportunities*						
	Computer	*Nursing*	*Qur'anic Studies*	*Commerce*	*Pharmacy*	*All Others*	*Total*
Females	16	15	11	7	7	44	100
Males	21	7	10	9	6	47	100

Chi-Square =15.64929, p=0.00972

perceptions of what is "science" and what is "arts", more students in science than in the arts selected fields related to science; their highest choices ordered by rank were computer, nursing and pharmacy. Also more students in the arts than in the science chose fields which were less linked to science, such as Qur'anic studies and commerce.

Table 24 Choices of Fields Giving Best Work Opportunities
(Total Percentages of Stream Category)

STREAM	*Choices of Fields Giving Best Work Opportunities*						
	Computer	*Nursing*	*Qur'anic Studies*	*Commerce*	*Pharmacy*	*All Others*	*Total*
Science	21	13	8	6	11	42	101
Arts	16	11	12	10	4	47	100

Chi-Square=25.60363, p=0.00011

As for regional choices displayed in Table 25 below, computer (programming) was the students' first choice in the three regions while pharmacy ranked at the bottom of the choice hierarchy. More northern and southern students than central, that is, a proportion of 46% to 42%, opted for "all others". For the rest of the choices, regional differences showed that computer (21%) and commerce (13%) which accounted for the highest percentages, were chosen by northern students while nursing and Qur'anic studies, each accounting for 14%, were chosen by southern students.

Table 25 Choices of Fields Giving Best Work Opportunities
(Total Percentages of Region Category)

REGION	*Choices of Fields Giving Best Work Opportunities*						
	Computer	*Nursing*	*Qur'anic Studies*	*Commerce*	*Pharmacy*	*All Others*	*Total*
South	16	13	14	4	7	46	100
North	21	9	9	13	6	42	100
Center	19	10	7	11	7	46	100

Chi-Square=26.67985, p=0.00293

Finally, local differences indicated that nursing which ranked highest among the responses of students living in refugee camps accounted for 17% of all their responses; computer, in contrast, ranked highest among choices of urban dwellers accounting for 20% of their responses, and pharmacy ranked highest among choices of rural dwellers accounting for 9% of their responses.

Significant differences in students' responses presented above seem to reflect their perception of their own reality: they represented their perception of a dichotomy between

Table 26 Choices of Fields Giving Best Work Opportunities
(Total Percentages of Localities)

LOCALE	*Choices of Fields Giving Best Work Opportunities*						
	Computer	*Nursing*	*Qur'anic Studies*	*Commerce*	*Pharmacy*	*All Others*	*Total*
Rural	17	14	10	7	9	43	100
Urban	20	8	11	9	5	47	100
Camp	11	17	9	9	4	50	100

Chi-Square=21.42448, p=0.01832

advantaged and disadvantaged groups, as well as a pattern of gender and class biased roles. Male students, science students, northern students and urban students seemed to perceive job opportunities in a field like computer (programming). Their perception seemed to reflect reality ; recently, it has been the case in the West Bank that those who have computer skills or specialize in computer programming have more access to employment. Students also seemed to perceive that such job opportunities were more accessible to the advantaged groups: to males rather than females, to science students and not to arts, to students from the north where businesses are located, and to urban or rural students rather than to students living in refugee camps.

In contrast, disadvantaged groups seemed to perceive fields in relation to what they saw relevant to their opportunities and their roles. Females, southern students and camp dwellers saw nursing as more suitable to them and thus made it their first choice among those fields giving best access to jobs. Note that nursing has been traditionally considered a "female" job in Palestinian society. As it is well-known, in deprived regions and in poor areas, people cling onto nursing as they know it might give them access to work. The findings here confirmed this claim: more students from the south than from the other two regions, and more camp students than from other localities chose nursing. Students' choices also reflected a perception of job status: males opted for fields like computer and pharmacy; arts students chose commerce, a field that would give status and perhaps good pay. On the other hand, rural students selected pharmacy, a field closer to medicine, which was apparently expected to give them access higher status employment.

3.4 Summary.

The data presented and analyzed in this section revealed the following findings all of which were found statistically significant and supportive of earlier findings in this study.

- **Knowledge of available fields.**

  In general, students' knowledge of available VETT opportunities was poor. Their knowledge of VETT services and fields of specialization offered at its institutions was

minimal and confined to their hearing of the titles of the fields rather than of what they entailed.

1. Of all the surveyed students, about 50% -66% were aware of the existence of nine professions, which included nursing, business administration and accounting, child education and radio and TV maintenance. The rest of the professions received about 40% of the responses, showing students' poor knowledge of VETT programs.

2. Gender differences were significant. They reveled the following:

   In most cases, males showed more awareness of the existence of most of the identified professions than females.

   Females' knowledge was restricted to **nursing** and **child education,** professions directly related to their roles as biological reproducers and family caretakers.

   Of 23 fields showing significant differences between males and females boys were aware of the existence of 17. Girls' awareness of the fields was restricted to six only: **nursing, nutrition, dressmaking, interior design, child education and ceramics,** again professions directly related to their roles as biological reproducers and family caretakers.

- **Access to knowledge on VETT sources**.

1. Responses of students showed that they had limited access to knowledge and information on VETT and its provisions, which was found to be drawn more from informal sources, such as family, friends, and previous graduates of VETT, than from formal sources.

   41% of students obtained knowledge and information on VETT from informal sources, in contrast, 9% obtained it from school, and 5% from community colleges, reflecting the minor role VETT institutions play towards its beneficiaries and target groups.

2. Gender differences showed that 49% of the females, in contrast to 35% of the males, depended on informal sources; and 39% of male students, in contrast to 30% of female students, depended on mixed sources and community colleges, which generally reflects the perception of an expanded sphere for males.

3. Less than 25% of all the respondents claimed awareness of the existence of formal VETT sources of knowledge and information. The major formal sources to which they had access were schools, i.e., through textbooks and lectures offered at schools, and then community colleges, i.e., through pamphlets and newsletters.

- **Need for formal VETT sources.**

1. About 80% of all students felt a strong need for formal sources of information on VETT.

   More students in the science stream, 87%, than in the arts, 74%, felt the need for formal VETT sources.

   Southern students were less interested than northern or central students in having access to formal VETT sources: the percentages were 73% of southern students, contrasted with 83% of each of the northern and central students.

2. About 33% of all the respondents saw that schools ought to take a leading role in providing this service; the next source they suggested was specialized sources, such as a specialized VETT resource center and special radio and TV programs.

3. Gender differences showed that a significantly higher percentage of females (35%) than males (30%) suggested school to be a principal source of information on VETT.

4. Stream differences showed that a significantly higher percentage of arts students (27%) than science students (14%) reported that they did not know who should provide information on VETT, and a significantly larger percentage of science students (38%) than arts (30%) suggested school to be a principal source offering information on VETT.

5. Regional differences showed that 27% of southern students, contrasted with 20% from the north, and 19% of those from the center, reported that they did not know who should provide such a service.

- **VETT fields giving best job opportunities.**

1. The top five fields selected by the surveyed students were in rank order: computer, nursing, Islamic and Qur'anic studies, commerce, and pharmacy.

2. Gender differences showed that females who chose nursing were twice as many as males: 15% to 7%. The percentage of male students who chose computer was 5% higher than that of females. Again this finding reflects gendered division of roles and relations.

3. Stream differences showed that more students in the science stream than in the arts chose science-related fields: 21% of them, contrasted to 16% of the arts, chose computer; in contrast, 8% of them chose Qur'anic studies and 6% commerce, contrasted with 12% and 6% of students in the arts selecting the same fields.

4. Regional differences showed that the highest percentage of students who opted for computers and commerce were northern, then came central students, while more southern students chose nursing and Qur'anic Studies. This finding reflects students perceptions of their regions and the work opportunities available there, and indicates that the south is perceived as conservative and less developed.

The findings presented in this section reveal significant issues, outlined below, which appear to have policy implications.

1. It appeared that there is no link between VETT and its potential target groups, 12th graders in public schools. This lack of communication resulted in reinforcing students' attitudes and perceptions of their roles and future opportunities, instead of meeting their needs and effecting changes in these attitudes and perceptions.

2. Attitudes and perceptions of the surveyed students appeared to be largely constructed by schooling, represented by the system of streaming, which was found to segregate between students in the science stream and in the arts stream. Students in the science appeared to have more access to sources of knowledge and information on VETT than students in the arts, which made them perceive more clearly their needs and opportunities.

3. The majority of the findings showed significant differences between males and females which strongly suggest a clear pattern of gendered division of labor in Palestinian society, showing females forming a disadvantaged group. Females and males seemed to see that they were prepared to play the role that was expected of them. Females' main role seemed to be reproductive and caretaking, while males' main role was productive and breadwinning. This pattern appeared clearly in the findings on students' knowledge and awareness of the existing fields. More girls than boys showed knowledge of fields related to child rearing, care of patients, and domestic affairs, such as nutrition and dressmaking, or knowledge of professions related to "soft" professions that require delicateness and softness rather than machinery and technology, as if, by nature, women are born to nurture, and men are born to think.

In addition, this gendered pattern of roles and relations was clearly reflected in students' choices: the choices females made indicated that they perceived their status and role as more confined to the private-domestic sphere or to areas conventionally identified as "female". In contrast, the choices males made indicated that they perceived more opportunities which help them attain wider access to the public sphere.

At this point, we can conclude that lack of adequate formal knowledge of available opportunities seemed to have affected students' choices as they relied on informal sources which reached them through their social circle. Responses regarding the need for formal VETT sources and the suggested sources revealed an impact of schooling on students'

attitudes and perceptions. They identified an existing dichotomy between the streams, science and arts, creating inequality between science students and arts students. Regional differences reflected in students' responses identified the southern region as distinct from the other regions in terms of access to information on VETT and lack of sense of direction, which also indicate that the region was deprived of advantages that the central and northern regions enjoyed better, which resulted mainly from maldistribution of wealth.

D. THEME 4: Attitudes Towards and Perceptions of VETT

As an integral part of a larger national and international world, men and women internalize attitudes and practices prevalent in the world surrounding them, and eventually externalize them. As stated by Heiberg in the FAFO report, certain dimensions of people's life seem to determine their dignity and integrity; some of these are related to the choices individuals make within a certain political, social and religious context.[33] Linda Nicholson claims that sex roles arise out of the socialization process practiced by the family and the educational system as a structural feature of contemporary society.[34]

Our study, thus far, has shown that students live in a male-oriented world which embodies male norms and attitudes from which females cannot separate themselves. On the contrary, they are compelled to function within the boundaries of this masculine world. Knowledge and information on VETT sources and opportunities appeared to be more accessible to males than females which seemed to limit opportunities for girls but relatively expand them for boys. Boys' and girls' awareness of available opportunities reflects a male-oriented world; more females than males showed awareness of fields related to the reproductive and caretaking role, and more males than females showed awareness of fields related to the productive wage-earning role.

Such perceptions of roles and relations were also found to be reinforced and shaped by schooling, through the system of streaming. Streaming appeared to create a dichotomy between students in the science and students in the arts, emphasizing that science is more valuable and more appreciated than arts. Moreover, the findings indicated that the sciences and the fields related to them are a male sphere giving males, particularly in the sciences, more access to knowledge and information as well as to the available opportunities than does the arts.

These findings suggest that social structures channel girls into the private world and males into the public world. What is meant here by "private world" and "public world" is broader than distinguishing between "staying at home" and "working outside the house". The private-public dichotomy refers to opportunities limited to the house or available outside the house, opportunities within the formal labor force or outside it, opportunities inside the region or outside it and inside the country or outside those boundaries. This separation is further supported by students' responses pertaining to their choices regarding which paths or avenues they were interested in taking directly after they graduated from school: Did they choose to marry, work, continue their studies or travel abroad.

In addition to access to knowledge and information, students' participation in decision-

making concerning their future studies, which eventually may determine their possible work opportunities, is affected by social attitudes and norms, and the values attributed to the opportunities available in the social world at large. In other words, students' attitudes are based on certain assumptions which they formulate as an outcome of their socialization in the family and/or the educational system channeling them.

Among the many questions raised in this frame are: What choices do students make and why? Do male and female students make similar or different choices? In either case, are there any gender differences in the attitudes underlying these choices? At this point, the study examined in more specific terms the desired choices which the surveyed students would make after graduating from high school. Would they study, marry, and /or work or travel abroad? How do they perceive vocational and technical educational tracks vis-a-vis academic educational tracks? Which educational institutions do they tend to join if they chose to continue higher studies? Why would they/ wouldn't they continue their studies? What fields of specialization attract them?

4.1 Aspirations and Desired Choices: Gender and Regional Differences

What do male and female students desire to do after graduating from school? What do they perceive as motivating their choices? Through students' responses we tried to establish an initial understanding of their attitudes and perceptions of the opportunities available to them in light of their own assessment of their near future.

Figure 11 represents students' desired choices regarding their future following graduation from high school. The results showed that over 41% of the total reported that they desired to complete higher education, 25% claimed they would like directly to go to work, 16% wanted to get married and 18 % desired to travel abroad for a variety of reasons, such as continuing higher education, seeking work, or getting married. Controlling students' responses for sex, stream, region and locale, we found that gender and regional differences were highly significant, while locale and stream appeared to show no significant relations to students' choices.

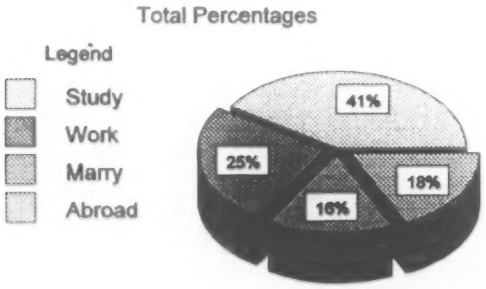

Figure 11 Desired Choices after School

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Gender Differences. Gender differences revealed here seemed to be compatible with the pattern of separating the public and the private worlds. Differences indicated that males felt they had access to employment even without attaining higher education, while females saw that they would not have access to certain kinds of professions, which have high status and which are socially approved of, was not possible if they did not attain higher education. A significantly larger number of females than males were inclined to continue their studies or to get married. In contrast, more males than females were inclined to work or to travel abroad. Regional differences showed that more students from the south than from the other two regions, the north and the center, desired to study and marry; more students from the north desired to work; and more from the center wanted to travel abroad. Tables 27 and 28 present the figures that reveal gender and regional differences.

Table 27 Desired Choices After School by Sex
(Percentages of Sex Category – 823 Respondents)

Desired	*Desired Choices*				
Choice	*Study*	*Work*	*Marry*	*Abroad*	*Total*
Males	31	33	11	24	100
Females	49	19	21	11	100

Chi-Square=64.46212, p=0.00000

Table 27 above shows that choices female students made were ordered as follows: the highest percentage of females, 49%, chose to study, 21% wanted to get married, 19% desired to work, and 11% wanted to go abroad. In contrast, the choices that male students made were in this order: the highest percentage (33%) wanted to work, 31% desired to study, 24% desired to go abroad, and 11% wanted to get married.

The choices female and male students made can be explained in terms of the labor force structure. Perceiving education as a source of possible future employment and an avenue to the formal labor force, the highest percentage of females were interested in continuing higher education. While females seemed to see higher education as a prerequisite to enter the formal labor force, males did not see that such a requirement was necessary. The results showed that more males than females were interested in going abroad directly after graduating from school in order to seek work opportunities or other opportunities. This suggests that male students were aware that they could be part of the labor force without education or higher education. In fact, to them work and higher education seemed to be equally accessible. They probably perceived work as a step towards economic independence, which could give them access to marriage and starting their own family.

Females, however, seemed to be aware that getting married did not require economic independence or having a job. Being aware of this reality and of the fact that getting married was women's destiny, more females than males were inclined to get married. The

finding showing that almost half of the females chose to continue higher education reflected their interest in moving away from the private world into the public world; their choice indicated that they must have perceived higher education as a means giving them access to employment, particularly high status jobs; without education they would not be able to enter the formal labor force. In general, these results reflect that women fall under more restrictions than men. If they choose to work they have to get higher education; if they choose not to, they can get married and stay dependent. On the other hand, men also fall under social restrictions; they feel responsible for earning the family's living, and thus may have to compromise higher education in order to seek work. The situation shows the dichotomy between males and females: males are the breadwinners and females are the dependent mothers and housewives.

Regional Differences. Table 28 below presents the regional differences revealed in the responses of students from the three different regions: the north, the south and the center. The highest percentage of students expressing a desire to study came from the south and those expressing a desire to work came from the north, as shown in the figures given below.

Table 28 Desired Choices by Region
(Percentages of Region Category – 823 respondents)

Region	*Desired Choices*				
	Study	*Work*	*Marry*	*Abroad*	*Total*
South	49	16	17	17	100
North	30	40	14	16	100
Central	37	27	16	19	100

Chi-Square=37.86905, p=0.00000

Table 28 shows that 49% of all the students who expressed a desire to study and 17% of those who expressed a desire to marry came from the south; of those who expressed a desire to work, 40% were from the north; and of those who wanted to seek travel abroad, 19% were from the central region. For southern students, their first choice was to study and their last choice was to work; for northern students, the first choice was to work and the last was to marry; and for central students, the first choice was to study and the last was to marry.

Regional differences clearly show that a significantly higher percentage of students from the south than the other two regions opted for higher education. This result seems to be in line with earlier findings which showed how the south was significantly different from the other regions. The south seemed to lack opportunities available in and accessible to other regions. Being deprived of equal opportunities and being physically separated from the other regions, southern students opted for higher education more than others;

they most probably saw in education a path to better status. It is to be recommended here that a thorough study should be carried to investigate the opportunities young men and women in the south have, in order to reach a clearer understanding of what makes the south significantly distinct from the other regions. A gender study as such would definitely contribute to promote better development in the south.

4.2 Why / Why Not Continue Studies: Gender and Other Differences

What motivations do students see underlying their choices for continuing or not continuing higher education? Do they perceive education as a vehicle to social mobility, or economic mobility or both? The FAFO survey showed that unlike Western societies, the positive correlation between education and income in Palestinian society seemed to be weak. Their data suggested that in general the individuals' economic position was more dependent on the family's social status; this was more apparent for refugees, who depended on education due to lack of property and sources of wealth; at the same time education did not seem to provide access to economic mobility.[35] On women's education specifically, the FAFO report showed that except for the most educated, women felt that education did not seem to increase their freedom of movement. However, education did seem to give them mobility into the labor force. The FAFO data revealed that "One of the prime functions of education is to equip women with the skills to participate in the public sphere of employment." [36]

Our survey showed that students continue to perceive higher education as a means for both social and economic mobility. By choosing to continue their studies, women seemed to be aware of the fact that the more educated they were, the more possible it was for them to find "decent" work. The surveyed students' responses as to why they would be interested in attaining higher education were divided between economic and social reasons of various types. The highest percentage of the responses included: "to get a better job" or " to have future security ". Social responses included " to help me become a better parent", "to improve my social status", and "because my family insists on that". A relatively minor proportion of the answers included a combination of economic and social reasons.

- Of a total of 788 respondents, 60 percent saw that a degree would give them security for the future, six percent felt it would give them access to a good job, seven percent said that it would help them become better parents, six percent claimed that their family insisted on that, and ten percent reported mixed reasons. Social mobility was the most frequent component of the mixed reasons; eight out of ten combinations included it as their first priority among the mixed choices they reported.

Responses were grouped into three categories of reasons, economic, social, and mixed. The categories were controlled for sex, stream, region and locale to investigate what might have determined students' motivation to seek higher education. Among the four, only region was found to be a determinant factor.

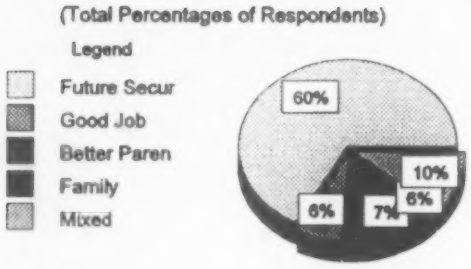

Figure 12 Reasons for Continuing Education

Table 29 below demonstrates regional differences among the respondents. Of all the respondents, more students from the center saw that education was sought for economic reasons, more students from the north saw it motivated by social factors, and more students from the south reported mixed reasons. The data suggest that the central region was more aware of the necessity for investment in education, assuming that access to education paves the way to better occupations and in the long run improves social and economic status.

Table 29 Reasons for Continuing Education by Region
(Percentages of Region Category)

Reasons	*Region Category*		
	South	*North*	*Center*
Social	17	28	24
Economic	57	59	66
Mixed	25	13	10
Total	99	100	100

Chi-Square=28.73554, p=0.00001

As shown in Table 29, the majority of students were inclined to continue higher education; a rather small percentage (12%) of them reported they were not. The question to be raised here, why these students did not see an opportunity? The reasons that they reported included the following: the family economic conditions and other private conditions; lack of personal and individual interest in education and having preference for work; marriage; and the family's attitude towards higher education. These reasons were recoded into three categories: family, economic status, and preference for work. When computed, the results revealed that 49% preferred to work, 22% were affected by the family, and 33% by the family's economic conditions. Examining the differences in students' responses, we found that only sex and performance were significantly related; these relations are presented in Tables 30 and 31 below.

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Table 30 Reasons for Not Continuing Education
(Percentages of Sex Category)

Sex	*Reasons*			*Total*
	Work	*Family*	*Economic*	
Males	60	12	28	100
Females	37	29	33	100

Chi-Square=6.87256, p=0.03218

Figures in Table 30 show that significantly higher percentage of males than of females, 60% to 37%, claimed preference for work; in contrast, significantly more females than males, 29% to 12%, claimed that family matters, such as family traditions and marrying girls at an early age, affected their choice of expressing no desire to seek higher education.

Table 31 demonstrates the differences between students' responses as determined by their averages in grade 11. It shows that the majority of those who preferred work to education (62%) scored an average of 70 or lower; in contrast, the majority of those who claimed they would not seek higher education for financial and economic reasons achieved average scores of 71-80. Those who scored 81 or higher were distributed evenly among the three categories as shown in the table below.

Table 31 Reasons for Not Continuing Education
(Percentages of Averages Category)

11th Grade Average	*Reasons*			*Total*
	Work	*Family*	*Economic*	
70 or <	62	18	20	100
71-80	34	20	46	100
81 or >	35	29	35	100

Chi-Square=10.07229, p=0.03923

Considering the earlier finding that science students were more academically motivated and better achievers than arts students, the differences between students in the arts and students in the science in how they perceived lack of opportunity for higher education offer a relational pattern compatible with the pattern revealed by the relation between performance (measured by average scores) and streams. Of the total number of students who did not opt for education, 51% were in the arts, contrasted to 37% in the science, claimed that on the personal and individual level they were not interested in education and had preference for work. On the other hand, 47% of students in science, contrasted with 27% of those in the arts, claimed that they would not continue their higher education due to the family's economic conditions.

These findings suggest that for low achievers, higher education was not perceived as an opportunity, so they chose to seek work. For average achievers, they probably saw no opportunity for higher education due to their poor economic conditions, which in turn may have affected their achievement at school. It should be noted that the majority of students who claimed that their family hampered their opportunity for higher education, 29%, got high scores- an average of 81 or higher- and that the differences between males and females showed that more females were affected by the family. This indicates that even when women are high achievers, their opportunities for education may be hindered by social norms like family traditions or early marriage. However, our survey could not statistically confirm these results because the numbers in the cells were too small for statistical analysis.

4.3 Summary. Data analysis regarding students' future choices presented above revealed the following findings all of which were statistically significant.

1. On the whole, students seemed to assume that continuing higher education was the norm; the majority, 41%, singled it out as their first choice, and 18% of them said they desired to travel abroad, some of whom desired to do so in order to obtain higher education.

2. What motivated students to attain higher education seemed to be perceived as related to finding better jobs and securing their future: of the total 60% claimed this.

3. Gender differences showed that
   - more females than males, 49% contrasted with 31%, saw their chances lying more in higher education in local institutions, and more of them, 21% contrasted with 11%, selected marriage.
   - more males than females, 33% contrasted with 19%, saw their opportunities in seeking work directly after they had graduated from high school, or in going abroad in order to seek work or higher studies.

4. Stream differences showed that
   - of all students who claimed that they had no interest in attaining higher education, and who rather preferred to work, 51% enrolled in the arts stream, contrasted with 37% enrolled in science.
   - 47% of students enrolled in science, contrasted with 27% of those enrolled in the arts, saw that the family's economic conditions prevented them from going into higher education.

5. Regional differences showed that the central region accounted for the largest percentage of students, 66%, who saw that their option for education was prompted by economic factors.

6. The reasons why some students did not choose to attain higher education seemed to offer answers compatible with earlier analysis: Females saw themselves affected by the private world – the family traditions, early marriage, and the reproductive role – their assumed destiny. Males saw in work an alternative to education. High-achieving students saw that they could not afford to attain higher education.

4.4 Vocational or Academic Studies

If the majority of the surveyed students chose to continue their education, and if the majority also saw a relation between attaining higher education and gaining access to better occupations, and eventually reaching future security, one would expect that a choice between vocational and academic studies would reflect where they would go to get better occupations. Considering the recent Palestinian market forces in operation, which have been in line with fields offered at VETT institutions, students were expected to select vocational education rather than academic university education.

To confirm or disprove these expectations, the following questions were raised: Would students head for academic tracks or VETT tracks? Would their choices conform with the expectations and claims of educational and economic planning structures? Or would they more in conformity with the general conventional perceptions of education and employment? In other words, would they choose academic tracks which are perceived as more valued by the society, regardless of their relation to the market needs? Would they avoid VETT tracks because of the secondary status VETT has occupied in comparison with university academic studies?

Recently, vocational/technical fields in Palestine have been claimed to be in demand, and thus have been ranked among the highest priorities at both community college level and university level. Academic streams, on the other hand, have been claimed to be producing large numbers of graduates that saturate the market. To our knowledge, empirical studies on (un)employment among graduates holding a BA degree or higher are not available. Statistics on employment by the number of years of education attained for the years 1987-1993 show that the higher the level of education attained, the higher the participation in the labor force.[37] This relation applied to both males and females, although the percentage of male participation was almost double that of female participation. However, these statistics did not show what areas of work labor force participation comprised. In this respect, the FAFO study reported data that showed an obvious gap between the kind of education male workers had and the type of actual employment they held. " Even if half of the labor force had 10 or more years of education, figures revealed that only 15% held high and mid-professional jobs." [38] As mentioned above, the FAFO study also reported that education seemed to give women access to the formal labor force, but did not show the kind of actual professions they occupied.[39]

In suggested plans for developing education and higher education several references were made to the necessity of developing vocational and technological fields of study, seemingly at the expense of liberal arts, since the recommended plans and budgets were geared in that direction. Some claimed that the market need was for those having technical

and vocational training, while graduates from academic tracks faced increasing unemployment.

In its proposal for a national VETT system in Palestine, for instance, the PNA Ministry of Education and Higher Education placed VETT among its top priorities for development. Although the proposal does not clearly state the objectives of the proposed VETT plan, it alludes to making this system capable of meeting the "labor market needs." The proposal states:

> Similarly the current Palestinian labor force largely lacks specific skills to meet the requirements for jobs at the middle and lower levels. Furthermore, the need for skilled labor in various areas is likely to increase in the near future. At present, the technical and vocational education and training system is far from adequate to meet the foreseeable new challenges facing the socio-economic development.[40]

A 1994 UNESCO report stated that one of the characteristics of Palestinian higher education was the imbalance which existed between academic fields (humanities, education and business) and science and technology programs. The report claimed that there was a strong need for increasing science and technology programs. It added, " if S&T [sic. science and technology] fields are not strengthened, large numbers will continue to graduate in the humanities and business administration, a group reported already to be facing unemployment. The highest demand has been for graduates qualified in nursing, management and medical technology." [41] The report cites an imbalance between academic fields and science and technology extending to community colleges and their role in sending out graduates from the academic stream into the unemployment market. "Many end up occupying unskilled or semi-skilled jobs. Technical and technological graduates do not meet employment problems, in spite of the limited job opportunities in the OT." [42] Although this claim may be actually true, the report did not provide a basis, statistical or otherwise, to support its claims.

The World Bank also recommended that higher education should aim at providing high-quality trained graduates, and community colleges in particular should develop in the direction of producing mid-level technicians such as medical technologists, electronic repairmen, and accountants.[43] Not only did this report present impressionistic recommendations, it also implied gender bias, as the professions perceived to be in demand were those relevant for and accessible to the " male breadwinner." Such recommendations indicate that the World Bank perceives unemployment as male unemployment, which reflects that it would overlook the issue of unemployed women when policies and strategies are designed to solve the problem of unemployment.

As mentioned in Part I of this study, almost all literature on VETT shows that VETT occupied a lower rank and status than academic studies in Palestinian society in the views of both providers and target groups, a pattern which is universally prevalent. We have also shown earlier that VETT has not received the minimal attention of planners or providers: its facilities are insufficient and outmoded; its curricula and direction are

outdated; its staff is less qualified than that of academic universities and its admission standards are lower than those set for universities and academic colleges; its student caliber is unmotivated and of a lower quality than that of universities; and finally, its relation to market opportunities is undefined and unclear.

Accordingly, should we expect that students' attitudes and perceptions of vocational and academic studies would mirror this reality? Would better qualified and more motivated students opt for academic studies? In contrast, would less qualified and more disadvantaged groups see limited access to opportunities in academic fields and would then opt for vocational studies? Would males and females have similar or different attitudes towards academic and VETT tracks and employment opportunities? The data presented in the following section offer answers to these questions.

4.4.1 Vocational/Academic Studies: Motivation, Gender and Regional Differences

What track did students select: academic or vocational education? The survey findings revealed expected results: students opted more for academic studies than for vocational studies irrespective of their sex, stream, region, locality or academic achievement. Of the total, 61% of students were in favor of academic university studies, 13% were in favor of vocational studies, and 26% reported they did not know. The six variables- motivation, performance, sex, gender, region and locale – were all found to be significantly related to students' preferences within the frame separating vocational tracks from academic tracks.

Vocational or Academic Studies by Motivation. Considering the figures displayed in Tables 32 – 36, we notice that they clearly indicate a significantly positive relation between motivation and choice of tracks, academic averages or performance, and choice of tracks. An increase in motivation is more likely to prompt an increase in choice of academic studies. The figures show significant differences between the most highly motivated students and those having average or low motivation: three quarters of the former group, in contrast to approximately half of the latter, chose the academic track. With regard to choice of vocational track, the students with the lowest motivation were more inclined to opt for vocational studies. Similarly, the higher the averages were, the

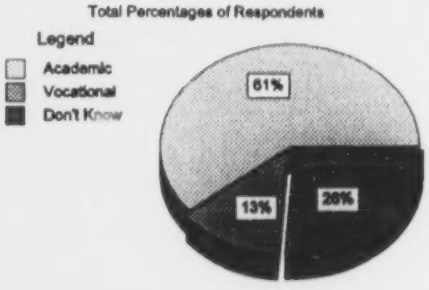

Figure 13 Vocational or Academic Track

larger the preference for the academic track, the lower for the vocational track, and the less likely the students tended to say "I don't know", i.e. they would not feel like making a choice. Table 32 demonstrates these results.

Of those who scored the highest averages, 71% chose academic studies, 8% chose vocational studies, and 21% could not make the choice. In contrast, of those who scored the lowest averages, 44% chose academic studies, 17% vocational and 37% did not feel like making a choice.

Table 32 Vocational or Academic Studies by Motivation and by 11th Grade Average
(Total Percentages of Responses on Motivation Category and Averages Category)

Motivation	*Vocational*	*Academic*	*Don't Know*	*Total*
High	8	73	19	100
Average	17	51	32	100
Low	21	52	28	100

Chi-Square=43.08360, p=0.00000

Averages	*Vocational*	*Academic*	*Don't Know*	*Total*
81 or >	8	71	21	100
71-80	14	63	22	100
70 or <	18	44	37	100

Chi-Square= 42.75299, p=0.00000

Table 33 Vocational/Academic Studies by Stream
(Total Percentages of Stream Category)

Track	*Science*	*Arts*
Academic	72	54
Vocational	11	15
DNK	18	31
Total	100	100

Chi-Square=27.79647, p=0.00000

The same relation is shown by the figures presented in Table 33. A significantly higher percentage of students in the science than in the arts chose academic studies, and a higher percentage of those in the arts than in the science reported they did not know what they would prefer, academic or vocational studies. Differences between the choices of students were significantly determined by the stream in which they were enrolled. More science students than arts students chose academic studies, and more arts than science students chose vocational studies or did not make a choice at all. These findings indicate that more students in the science stream than students than in the arts who scored

higher averages, probably felt that academic studies would give them more access to better occupation opportunities and eventually economic and social mobility.

Gender Differences. Gender differences seemed to maintain a similar pattern. Figures in Table 34 show a higher preference for academic studies over vocational studies: more boys than girls chose either track, and more girls than boys did not feel like making the choice. This finding is consistent with earlier findings reveled by gender differences. Although girls' first choice was to continue their education, mainly in the academic track, they seemed to still see themselves as being confined to the private sphere, and so they perceived more limited opportunities than those of boys; boys saw greater choices that would give them access to the public sphere.

Table 34 Vocational/Academic Studies by Sex
(Total Percentages of Sexes)

Track	*Females*	*Males*
Vocational	10	16
Academic	57	66
Don't Know	33	18
Total	100	100

Chi-Square=24.45605, p=0.00000

Regional Differences. Regional differences were apparent in responses regarding academic studies and students' inability to make a choice. Among students who selected vocational studies, however, these differences disappeared. The lowest percentage of students opting for academic studies was from the south: the percentages were 54% of southern students, 63% of northern students, and 67% of central students opted for academic studies. Also, a significantly higher percentage of students from the south than from either the north or the center were unable to make a choice or perhaps did not feel motivated to make a choice: the percentages were 33% of southern students, 20% of central students, and 21% of northern students.

This finding looks surprising considering that more southern students than northern or central claimed to be interested in continuing higher education after graduating from high school. This high percentage of students from the south answering "I don't know" could be interpreted across the unclear conditions under which they lived. At the time of the writing, the Hebron area where the survey was carried out in the south is still under occupation and its future is still unresolved. This may have affected students' responses, and thus they might not have felt ready to make clear choices.

When students' choices were controlled for other social factors, such as birth order, parental education, employment, and locality, they did not show any significant relations. Even when this relation was further examined by separating the responses of males from

Table 35 Vocational/Academic Studies by Region
(Total Percentages of Region Category)

Track	*South*	*North*	*Center*
Academic	54	63	67
Vocational	13	13	13
Don't Know	33	21	20
Total	100	100	100

Chi-Square=18.32456, p=0.00000

those of females, it did not prove to be significant, except in one case. Education of the mothers of girls appeared to be significantly related to girls' choices between academic and vocational studies – a relation expressed in Table 36 below.

Table 36 Females' Choices between Vocational / Academic by Mothers' Education
(Percentages of Female Category)

Choice	*Mother's Education Level*			
	Elementary	*Preparatory*	*Secondary*	*Higher*
Academic	51	56	65	82
Vocational	13	9	6	12
Don't Know	37	36	30	6
Total	100	100	100	100

Chi-square = 17.95902, p= 0.00634

Table 36 demonstrates that 82% of the girls whose mothers had higher education chose university academic studies, 12% chose vocational, and 6% did not make a choice. In contrast, 51% of the girls whose mothers were illiterate or had up to six years of education chose academic university studies, 13% chose vocational, and 37% did not make a choice. These figures suggest that the more educated the mothers were, the more likely their daughters were to opt for academic studies, and the more likely they were to make the choice between academic and vocational studies.

4.4.2 Why Vocational or Academic: Stream and Regional Differences

The question regarding what students perceived as motivating them to choose academic or vocational studies was left open. The answers students suggested included a variety of 18 different answers, three of which constituted a combination of individual answers. The following lists the different answers that students gave as well as the percentages they received. They reported "I chose academic studies or vocational studies because:

1. "it secures my future; it gives me good work opportunities; it is needed by the current market forces" (12%) ;
2. "it gives women social status; education is useful for women" (4%) ;
3. "it helps me develop an independent personality and clear thinking; academic university studies require higher level intelligence; technical education is more useful than academic studies; to improve my academic/scientific level" (14%) ;
4. "education is my goal in life; I love university studies; I like my teachers and the subjects taught; it is my family's desire; I want to learn the principles of religion; I have a personal interest in it" (28%) ;
5. "I do not know" (40%).

Such answers suggest a number of important issues about students' attitudes towards and perceptions of education. The first group of answers indicates that students who gave these answers probably believed that education could be transformed into occupation, which could give them economic mobility. The second and third groups of answers express how students perceived the impact of education on individuals in the society, with the third group being particularly related to its impact on women. The fourth group of answers appear to be vague and meaningless; however, it is indicative of students' hidden assumptions about the impact of education on the individuals' lives which may be of a similar nature to that inferred from the second and third group of answers. The fifth group shows that 40% of the respondents did not know why they made their choice between academic and vocational studies.

Although concrete conclusions are not to be drawn from vague and general answers, some preliminary comments may be made. Respondents seemed to see in education an opportunity to attain social mobility, to gain empowerment over their personal lives, and perhaps to become more influential. This is clearly expressed by the phrases or sentences that the students used in framing their answers. For example, some answers contained phrases like "gives me an independent personality, clear thinking, and a higher academic level; requires intelligence; gives social status and it is useful; represents my personal interest and goal in life". Such attitudes reflect the persistent perception of education as a path to achieve social status even when it does not lead to employment.

However, some studies on Palestinian society suggested that the impact of education on individuals' lives did not seem to be as powerful as other factors, such as the family's social status or economic wealth. In the FAFO survey of the impact of education on individual autonomy and perception of influence, they reported a certain correlation between education and influence which varied in strength and varied with the addressed, the domestic or the public. In general, education seemed to increase the degree of the individual's influence and authority more within the family and the community than outside those boundaries. As for gender differences, education seemed less effective in distributing authority between men and women. Men felt much more influential and had an increased sense of authority than women within the domestic sphere; outside this sphere, education slightly increased men's authority, but it did not seem to have any

impact on empowering women. [44] As shown below, the percentages representing students' answers regarding why they think they chose academic or vocational higher education conform with the FAFO finding on the relation between education and social or economic mobility.

The majority of the surveyed students felt that education was going to contribute to their personal and social development, a minor percentage felt that it would improve women's status, and a relatively small percentage perceived it as a vehicle to work opportunities and future security. Such responses indicate that, in general, education has its impact on the individual's personal life, yet less on women's lives, and that it is not so much related to work opportunities and economic status. A good percentage of respondents, however, made a choice between vocational and academic studies, and as shown previously, the majority of them opted for higher education, but could not explain why. These findings also suggest that students internalized assumptions about education and its impact but could not externalize them. However, a more elaborate analysis of the students' attitudes and perceptions regarding the relation of education to their social and economic development cannot be reached through statistical studies only. Rather, it requires extended interviews and focus group discussions, which are beyond the scope of this study at present.

4.4.3 Students' Choices: Stream and Regional Differences.

The numbers accounting for individual answers regarding what underlies students' choices between vocational and academic university tracks were too small to break down. Therefore, we recategorized the answers into four categories in order to reach some understanding of what might have determined the choices. The new categories were recoded as follows: "work-related reasons, socio-personal reasons, mixed reasons," and "do not know" (i.e. no reasons were given). The results reveal that more students felt that their choice was related to their socio-personal status than to their economic status. The factors that appeared to have affected their choices were stream and region. Gender and locale differences did not appear to be of any importance.

- As shown in figure 14, of a total of 853 students, 44 percent reported that their choice of either track was due to socio-personal factors, 12 percent saw their choice as work-related, 3 percent as motivated by a combination of socio-personal and work-related reasons, and a large percentage, 41%, reported that they did not know why they made the choice.

Stream Differences. Table 37 shows that more students in the science stream than in the arts saw their choices related either to work or to socio-personal development. In contrast, more students in the arts than in science did not see the relation or did not feel that they could explain this relation. As shown in Table 37 below, of the total number of students in the arts, 48% did not give an answer, 40% saw their choice motivated by socio-personal factors, and only 10% saw it as work-related. In contrast, 51% of all students in

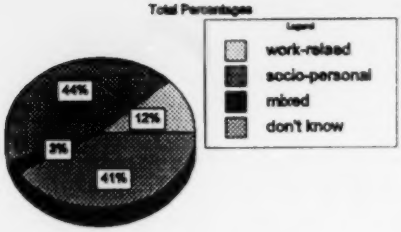

Figure 14 Why Choose Vocational/Academic

science felt that their choice was motivated by socio-personal factors, 30% did not know why they made the choice, and 15% thought it was work-related.

Table 37 Why Vocational/Academic by Stream
(Total Percentages)

Stream	*Reasons*				
	Work-related	*Socio-personal*	*Mixed*	*Don't Know*	*Total*
Arts	10	40	2	48	100
Science	15	51	4	30	100

Chi-Square=31.67476, p=0.00000

These results are consistent with earlier findings on the relation between stream and students' academic achievement, performance, and knowledge. More science students than arts students scored higher averages, showed better achievement in overall performance, were more highly motivated, complained less about the curriculum and the school in general, had more awareness of the need for information about VETT and where it should be provided, and were more certain of which fields they thought gave better work opportunities. The data so far suggest that science students form an advantaged group, that receive more attention and appreciation of the educational system and the society at large. They seem to have larger opportunities to develop better abilities and to have more access to knowledge than arts students. This implies that schooling predisposes students at an early age, even before their abilities and skills have been fully-developed; they are categorized into advantaged and disadvantaged groups, and their future opportunities are determined accordingly.

Regional Differences. The findings revealed strong differences between responses of students from the south and of those from either the northern or central regions. A significantly higher percentage of southern students could not identify the relation between their choice and why they made it; a slightly larger percentage saw it as work-related. In contrast, a significantly larger percentage of students from the north and from the center

felt that their choice was related to their social and personal development. The figures displayed in Table 38 below show this relation.

Table 38 Why Vocational/Academic by Region
(Total Percentages of Region Category)

Region	*Reasons*				
	Work-related	*Socio-personal*	*Mixed*	*Don't Know*	*Total*
South	15	33	1	51	100
North	8	57	6	29	100
Central	11	50	3	36	100

Chi-Square=52.47409, p=0.00000

The table presents the following findings: a) 51% of students from the south, contrasted to 36% of those from the north, and 29% of those from the center, said they did not know why they made the choice between vocational or academic university studies; b) 57% of the students from the north, 50% of those from the center, and 33% of those from the south, thought their choice was related to their social and personal status; c) 15% of southern students, 11% of the central, and 8% of the northern, saw their choice as work-related. Again, these findings seem to be in line with earlier findings on regional differences regarding knowledge and information on VETT, as discussed below.

Although more southern students than northern or central students claimed they were more reached by community colleges, obtained more information from school, and chose to continue higher education, they were disadvantaged in more than one way. They were less certain about their need for formal VETT sources or where the service should be provided. Southern students accounted for the smallest percentage of all students who chose the academic university track, and they formed the largest percentage of all students who did not make a choice of either track.

These findings reflect a significant sense of lack of knowledge or empowerment, or lack of both, which again could be traceable to their undefined future and perhaps to physical distance from the rest of the country. Recently, the military and political separation of the south from the rest of the West Bank may have contributed to the significant differences that appeared between the south and the other regions- the north and the center- which suffer fewer separation restrictions. In addition to that, as it has generally been known, the south is usually distinguished for being the region that is least developed socially and economically, and in this case, the south has been deprived of privileges that the center, and the north to a lesser extent, enjoy due also to maldistribution of wealth discussed earlier in the study.

4.4.4 Summary. The findings on the choice between vocational studies and academic studies and the reasons underlying the choices respondents made revealed the following:

Vocational or Academic Studies.

1. Of the total number of respondents, 61% were in favor of academic university studies, while only 13% chose vocational studies. Differences in students responses revealed the following:

   73% of the most-highly motivated students and 71% OF those who obtained the highest averages in grade 10 and 11 at school, chose the academic track; in contrast, about 50% of those who reported low or average motivation and 44% of those with low averages made the same choice.

   Only 8% of highly motivated students and of those who scored high averages (81 percent or higher), contrasted with 21% of students with low motivation and 18% of those with low averages, chose vocational education.

3. Gender differences revealed that of all male students, 66% chose academic studies and 16% vocational, while of all female students, 57% chose academic studies and 10% vocational; the females who did not make a choice were twice as many as the males.

4. The level of education of mothers appeared to be significantly related to female students' choices between academic and vocational tracks. Of those students whose mothers had achieved higher education, 82% chose academic studies.

5. Regional differences showed that:

   Southern students formed the lowest percentage of all students who opted for academic studies; the percentages were: 54% of southern students, contrasted with 63% of northern, and 67% of central students.

   They also formed the highest percentage of those who did not make a choice between the two tracks; the percentages were: 33% of southern students, contrasted with 21% of northern, and 20% of central students.

   Only 13% of students from the three regions- the south, the north, and the central opted for vocational education.

Reasons Underlying Students' Choices.

1. Of a total of 853 respondents, 44% reported their choice between vocational and academic studies to be affected by socio-personal factors, while only 12% felt their choice, to be affected by factors related to future employment.

2. Stream differences showed that about half of the arts students did not know why they made their choice, and that 51% of the science students reported that their choice was affected by social and personal factors.

3. Regional differences showed that the highest percentage of southern students, 51%,

were not aware why they chose either track; in contrast, 57% of northern students and 50% of central students reported that their choice was based on socio-personal matters.

4.5. Fields of Specialization: Gender, Stream and Regional Differences.

To be able to uncover students' attitudes and perceptions of available opportunities in education, the surveyed students were asked to list three different fields in which they would desire to specialize, ordered by priority. Responses to this question were expected to provide an understanding of the students' future directions: whether their choices of different fields of specialization were linked to their choice between vocational and academic tracks and whether such choices stemmed from socialization at school and in the family. In response to this question, students suggested a total of 67 areas of specialization ranging from "astronomy" to "carpentry, beauty care and barber work." Before giving a statistical analysis of the responses, we will report the raw data in frequencies.[45]

The findings show that, of the total number of respondents, 66% chose the fields listed in Table 17, 22% chose a variety of fields, each of which received less than 1% (i.e. between 1 and 8 students chose it), 12% reported they did not know in which field they desired to specialize. Most of the fields that the students suggested were among the conventional fields and among those offered in Palestinian institutions. Among the areas in which students claimed interest and which were not commonly offered at Palestinian institutions were: photography, astronomy, air host/hostess, driver training, electronics, science and technology, and X-ray technology. Police work, not unexpectedly at present when Palestinians are trying to build their institutions for the new state, was another field suggested by 8 students.

The data indicate that the fields suggested by the students were mainly derived from what was available in the larger social world around them. Their priorities seemed to be affected by the relationship between the field they suggested and the stream in which they enrolled, by how vocational and academic tracks were perceived, and to some extent, by the social values attributed to the professions. Frequencies in Table 39 below represent students' top fifteen choices among 67 fields of specialization in order of priority.

What do the fields selected by the students and the order in which these fields presented themselves imply? Table 39 shows that the top five priorities in which students claimed interest were medicine, nursing, engineering, law and business and accounting. All these fields are science-related and, except for nursing, they tend to give access to high-status professions. The second five priorities- teaching, pharmacy, languages, computer and journalism- are either science-related or arts-related, and tend to give access to teaching and other professional careers of a similar nature. Computer (programming) seemed to be perceived as an acceptable and desired field which would give access to occupation. The finding that computer ranks among the top ten fields desired by the students supports our earlier finding regarding the fields giving the best job opportunities, in which computer (programming) occupied first rank among the choices.

Table 39 Desired Fields of Specialization
(Total Percentages of all Respondents)

greater than 6%	*%*	*5% to 3%*	*%*	*1% to 2%*	*%*
Medicine	11.7	Teaching	4.6	Secretary & Bus Adm.	1.6
Nursing	8.8	Pharmacy	3.4	Sociology	1.6
Engineering	8.7	Languages	3.3	Political Science	1.5
Law	6.4	Computers	3.3	Lab Analysis/Electronics	1.4
Business & Accounting	5.8	Journalism	2.7	Mathematics/Fine Arts	1.1
Total	41.4	Total	17.3	Total	7.2

The third category of fields suggested by the students constitutes a mixture of fields that are related to all streams. Three of these disciplines such as lab analysis, secretarial skills, and electronics, give access to vocational/technical occupations; being associated with business administration, secretary came at the top of the list. The status of the rest of the choices with respect to career opportunities to which they give access does not seem to be clear; they may give access to careers in paths like education, the media, and banking. Or they may lead students to graduate studies if they wish to attain a more specialized educational background.

Desired Fields of Specialization Recategorized.

The above analysis of the fields of specialization presents a pattern showing a sharp dichotomy between academic fields and vocational fields, and between science-related and arts-related fields. To examine the differences between students' suggestions of desired fields, we recoded their responses, and followed this pattern in the categorization. Thus, the chosen desired fields were categorized into the following four categories: academic science fields, academic arts fields, vocational fields, and commerce/ business fields. This last category was placed separately, as it could be as science-related, arts-related, or vocational-related field. [46]

The data indicate that, overall, the most frequently chosen category was that of academic science fields, irrespective of sex, stream, region or locale. Breaking down students' responses further, we found several significant differences between students' responses pertaining to sex, stream, and region. More males than females seemed to be in favor of academic science fields; significantly, differences between science and arts students seemed to be in line with streaming; regional differences were reflected in more students from the south than from the other regions suggesting academic science fields and vocational fields, while significantly more students from the center and the north suggesting academic arts fields and commerce fields.

Figure 15 shows the percentages of respondents' choices, grouped according to the new categorization. Of a total of 750 respondents, 48 percent chose academic science fields, 28 percent vocational fields, 17 percent academic arts fields, and 7 percent

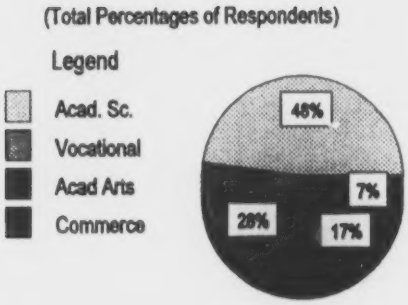

Figure 15 Students' Choices of Desired Fields

commerce fields. When students' responses were controlled for all four variables, sex, stream, region, and locale, the results revealed significant differences only in the responses of the sexes and of the students coming from the different regions.

Regional Differences. Table 40 demonstrates that out of all respondents, the highest percentages (55%) of those who chose academic science fields and 31% of those who chose vocational fields, came from the south. Students from the center formed the largest percentage (24%) of those who selected academic arts. The percentage of students from each the north and the center who opted for commerce, was more than three times the percentage of students from the south making the same choice: while students from the north formed 11% and those from the center formed 10%, southern students formed only 3%.

Table 40 Students Choices of Desired Fields by Region
(Percentages of Region Category)

Region	*Choices Of Desired Fields*				
	Academic-Science	*Vocational*	*Academic-Arts*	*Commerce*	*Total*
South	55	31	10	3	100
North	47	26	16	11	100
Central	41	25	24	10	100

Chi-Square = 37.29430, p =0.00000

It was surprising to find that the smallest number of those who selected commerce came from the south, especially since it has more merchants and larger businesses than the north and the center. The south has a large textile industry; the rural areas are agricultural and the region's major city, Hebron, contains a substantial merchant class, comprising small and large merchants, particularly including those dealing with agricultural

products. Our findings further support this phenomenon; students' responses showed that more families of southern students than of northern or central students owned private businesses and enterprises: of 224 students whose families owned enterprises, 53% were from the south, 22% from the north and 25% from the center. (Chi-Square=9.67643, p=0.00792).

The findings suggest that the socio-economic world in which the surveyed students lived had an impact on their attitudes and perceptions of their life opportunities. The choices that southern students made regarding what fields they desired to specialize in may be interpreted in more than one way. They can be explained in terms of business and trade which is controlled by big families called *"hamoulas"*. These families and *hamoulas* have bound structures and networks that cannot be penetrated easily, so it is expected that young students, who do not come from a family or a *hamoula* that owns a business or an enterprise, would not think of specializing in commerce as they see no opportunity for starting a business. On the other hand, being physically distant from the rest of the country, southern students seemed to have less access to education and to have weaker means of communication than central or northern students, who are closer to each other and have more contact.

The central region, and to a lesser degree the northern, have always incorporated the largest percentage of intellectuals, politicians, institutions, (educational and otherwise), and have had more contact with the outside world. Hence, southern students probably felt that obtaining education in academic science fields would give them prestige and social mobility. Higher educational opportunities available in the south, especially in Hebron City, might have affected their choices. The Hebron area has the Polytechnic, an institution which is mainly oriented towards science and technology on two levels: academic and vocational; the Hebron area also has another community college, offering VETT programs, a few of which are in the areas of science and technology.

When put in the context of the earlier findings we reported above, the results indicate that certain factors had an impact on students' choices. In one rural school in the south, the vast majority of the surveyed students, even among the arts, desired not only to continue their studies, but also to attain the highest educational levels. They expressed their desires to obtain M.A. and Ph.D. degrees in medicine, law, surgery, neurosurgery, computer engineering and several other disciplines. This seems to indicate that either the family or the school, or both participated in formulating students assumptions and structuring their perceptions of available life opportunities. The overall findings, in this respect, suggest that the socio-economic and educational world around the surveyed students must have affected their attitudes and perceptions. The data also revealed differences in students' attitudes based on their gender and the stream they enrolled in, as explained below.

Gender Differences. Table 41 shows that more males than females chose academic science fields and commerce fields; in contrast, more females than males chose academic arts and vocational fields. Of the total number, 44% of male students as opposed to 52%

of female students, opted for academic science fields, while 3% more females than males opted for vocational fields.

Table 41 Desired Fields by Sex
(Percentages of Sex Category)

Sex	*Choices Of Desired Fields*				
	Academic-Science	*Vocational*	*Academic-Arts*	*Commerce*	*Total*
Females	44	29	22	5	100
Males	52	26	12	10	100

Chi-Square=19.28542, p=0.00000

Stream Differences. Table 42 demonstrates that the vast majority of students in science opted for academic science fields; in contrast, students in the arts were distributed by larger percentages than science students over vocational fields, academic arts and commerce fields, by rank order. Note that 30% of students in the arts chose academic science fields while only 5% of those in science chose academic arts fields.

Table 42 Desired Fields by Stream
(Percentages of Stream Category)

Stream	*Choices Of Desired Fields*				
	Academic-Science	*Vocational*	*Academic-Arts*	*Commerce*	*Total*
Science	71	19	5	5	100
Arts	30	35	26	9	100

Chi-Square= 132.05877, p=0.00000

What Do These Differences Suggest?

Gender differences seemed to consistently reflect gendered roles and differences in opportunity. Women are channeled to fields that would give them access to lower ranking professions than they would for males. They seemed to make choices guided by assumptions which they had internalized regarding professions "suitable" for them, such as teaching and vocational professions. Males, also guided by internalized assumptions, made choices that seemed to channel them into high-ranking occupations and into the world of business and commerce. Stream differences indicate that science disciplines were perceived as more valued than arts fields, vocational fields, or commerce. Science students seemed to see a defined direction, as they, by a vast majority, chose academic science fields. Arts students, in contrast, seemed to see their chances as not restricted to one path; it is also possible that they were not sure which direction to take.

These findings suggest that academic science fields were assumed to open up

opportunities that are more accessible to males, and primarily to male students in science; vocational and academic arts paths were seen as predominantly accessible to female students and to students in the arts; commerce fields were perceived to be reached first by males, then by male students in arts, and third by female students. This interpretation of the findings presented here was supported by significant differences revealed when responses of the sexes separated by stream, and stream differences separated by sex, were examined. Table 43 below demonstrates these results.

Table 43 Desired Fields by Sex by Stream
(Total Percentages of Stream Category)

Desired Fields	*Sex by Stream*			
	Females		*Males*	
	Arts	*Science*	*Arts*	*Science*
Academic-Science	32	62	28	80
Vocational Fields	34	23	36	15
Academic-Arts	30	10	21	1
Commerce	5	6	14	4
Total	100	100	100	100

Females: Chi-Square=39.47638, p=0.00000. Males: Chi-Square=101.77770, p=0.00000

As seen in Table 43 above, among the males, a significantly larger number of science students than of arts students selected academic science fields, and more arts students than science students chose vocational fields, academic arts fields, and commerce fields. The same difference was maintained when responses of females in science and in arts were compared. The choices that were made by both male and female students in the arts stream were distributed over vocational, academic arts, and commerce, by larger percentages than the choices made by students in the science.

Note that 34% of females and 36% of males in the arts chose vocational fields, while 23% of females and 15% of males in science made the same choice. The percentages were lower for arts choosing academic arts fields, 30% of females and 21% of males in arts chose these academic fields; in contrast, 10% of females and 1% of males in science chose the same fields. As for commerce, almost equal percentages of females in arts and in science chose this field; the difference between males in science and males in arts selecting the same field was significantly higher: male students who were enrolled in arts and who chose commerce formed 14%, while those in science who also chose commerce formed 4%. Table 44 displays differences between the responses of males and females separated by stream.

- Among the sciences, more males than females chose academic science fields; more females than males chose vocational, academic arts and commerce fields. Among the arts, significantly more females than males chose academic arts and a 4% more

Table 44 Desired Choices by Stream by Sex
(Total Percentages of Sex Category)

Desired Fields	*Stream by Sex*			
	Science		*Arts*	
	Males	*Females*	*Males*	*Females*
Academic-Science	80	62	28	32
Vocational Fields	15	23	36	34
Academic-Arts	0.6	10	21	30
Commerce	5	6	14	5
Total	100	100	100	100

Science: Chi-Square=19.60610,p= 0.00000 **Arts**: Chi-Square=13.87588, p=0.00000

females than males chose academic science fields; more males than females chose commerce and 2% more males than females chose vocational fields.

These figures tell us that students seemed to see that opportunities in science fields were primarily accessible to those enrolled in the science stream; however, first they were seen accessible to males in science and then to females. On the other hand, vocational fields were seen as more accessible and suitable for students in arts; this path was also perceived as more accessible to or suitable for female students in the science stream. Academic arts fields were perceived as open primarily for arts students and more so for females than for males, and commerce was primarily accessible to male students in arts and, to a smaller degree, to male and female students in science.

This suggests that students seemed to assume that more valued and more accessible opportunities are primarily found in academic science fields. A minor percentage of students in the science chose fields outside the sphere of science. On the other hand, although choices of students in the arts demonstrated versatility of paths, their expectations concerning opportunities available to them were apparently not high. They probably perceived these paths as ones that would give them access to professions of lower ranking than those provided through science fields.

4.6 Choice of Educational Institution. Attitudes and perceptions of the surveyed students were also reflected in their choices of which educational institutions they desired to join and why they made that choice. Their ranking of where they would like to continue their studies – Palestinian universities or community colleges, or institutions abroad- and their explanations of why they made their choices, could be very informative. The questions raised were: Do choices of male and female students reflect equal opportunities? What factors restrict these opportunities? Are these factors social, economic, or gendered? Are they related to the system of streaming and/or to students achievement?

To reach an understanding of these issues, the surveyed students were asked three questions. They were given a list of 13 Palestinian universities and community colleges, and were asked to check the name of the institution they would like to join after they graduated from high school. If the provided list did not include their choice, they were advised to add it to the list; they were also asked to give the reasons for their choice and to mention whether their family had to approve of the institution they chose. We started by looking at the students' responses in terms of their ranking of Palestinian educational institutions, universities and community colleges, and their choices between higher education in Palestine or outside Palestine, because some of the major questions of the study were concerned with the existing status and dichotomy between vocational and academic studies, with students' awareness of available opportunities, and with their attitudes and perceptions of these opportunities.

As expected, a significantly larger percentage of students preferred academic institutions to VETT institutions. Frequencies showed that of a total of 853 surveyed students, about 82% chose universities and only about 6% chose community colleges. This finding strongly confirms the lower status that VETT occupies in comparison with academic institutions. A breakdown of these frequencies showed that 63% of the respondents selected Palestinian universities, 9% selected universities in Arab countries (mainly in Jordan), 10% American and European universities, and 11% reported that they did not know where they would prefer to study. The question that is of most relevance here is: How did students rank Palestinian universities and community colleges?

Table 45 below presents the frequency percentages of students' choices of the different educational institutions in Palestine. The figures in the table show that Birzeit University occupied first rank among students' choices. Next in rank came Al-Najah National University and two other central universities- the Nursing College (officially known as The Arab Colleges for Medical Professions) and Abu Deis University (officially called Al-Quds College for Science and Technology). Bethlehem University and the Polytechnic, in Hebron City, came third in rank, and Gaza Islamic University ranked at the bottom of the list.

These findings are not surprising; additionally, they suggest a few factors that seemed to have affected students' choices and their ranking of higher educational institutions.

Table 45 Desired Choices of Palestinian Educational Institutions
(Total Percentages of 853 Respondents)

Palestinian Universities	62.7%	Palestinian Colleges	5.5%
Birzeit University	19.2	UN – RWTC	2.5
Al-Najah University	14.3	Al-Ummah	1.2
Nursing College	7.7	Al-Arroub	0.8
Abu Deis	7.4	Al-Ibrahimiyah	0.6
Bethlehem University	6.8	Al-Asriyah	0.4
The Polytechnic	6.8	Khadoury	0.0
Gaza Islamic University	0.5		

Among the factors in effect were the following three: the fields offered by the institution, its long tradition and reputation, and its location. Birzeit University, for example, ranked at the top of the list because it is the oldest of all Palestinian universities, it is located in the central part of the country, and it has established a good reputation for high standards, in both academic and non-academic matters. The surveyed students seemed to perceive Birzeit University as prestigious and not distant to most Palestinian students in the West Bank.

Apparently, what seemed to have affected students' choices of the Nursing College and Abu Deis College, in addition to their central location, was the areas of specialization they offered in the fields of science, technology and para-medicine. The fact that the Polytechnic did not rank as high as Abu Deis or The Nursing College, although it offers programs in science and technology, as well as other academic fields, may be attributed to its location. It is located in the south, in Hebron City, which is becoming more and more physically remote and detached from the central and northern regions of the West Bank. Students' choices of Bethlehem University and Gaza Islamic University seemed to be affected by two main factors; similar to Hebron, they are both located in the south, with Gaza suffering further remoteness and separation from the West Bank than Bethlehem or Hebron. The second factor is related to the programs they offer; both offer specialization in disciplines in the humanities, an area which is not perceived as prestigious or as capable of offering opportunities of acceptable values, as is perceived of science-related fields.

Students' choices reflect an obvious separation between the science and arts streams, which was most apparent in the percentage of students who opted for Bethlehem University and Gaza Islamic University in comparison with those who selected Birzeit University, Abu Deis College, or the Nursing College. Guided by their perceptions of science and arts as disciplines and upon what they assumed these tracks would likely to offer them, students were more in favor of institutions that would offer them science and technology-related fields of specialization. Furthermore, students' perceptions of academic university studies and of VETT reflected the effect of streaming in their choices; the figures in Table 45 above indicate that students were much less interested in joining VETT institutions, as was reflected in their choices of community colleges.

The interpretation of students' choices and ranking of universities, given above, also applies to students' choices of community colleges. The data show that students were not keen on choosing community colleges; however, among the few choices they made, the UNRWA Ramallah Women's Training Center (RWTC) was at the top of their choices among community colleges. Similar to the status of Birzeit University, RWTC is the oldest of all Palestinian community colleges, and it has established a good reputation. It was somewhat surprising to find that Al-Ibrahimiyah College, which is located in Arab Jerusalem, received only 0.6% of the choices although it is also an old and well-known college. Apparently, by not choosing it, students were not willing to take the risk or to challenge the distance, as they did for the universities specialized in science and technology and medical professions.

Educational institutions as well as other institutions, located in Arab Jerusalem, are becoming increasingly separated everyday from the West Bank or Gaza Strip. Al- Asriyah College does not seem to be as popular among students, although it is located in the center and offers a variety of areas. Khadoury apparently did not seem to be heard of, especially with its new name, The Palestine Technical College at Khadoury. What may also be possible is that students were more interested to move towards the center rather than to the north.

In an interview with the Dean of Khadoury[47], Dr. Adnan Sleih, he offered us an explanation. He mentioned that when Khadoury was run by the Israeli authorities, it was neglected and its infrastructure was almost completely destroyed. It specialized in offering agricultural VETT programs, but these were closed right after the 1967 Israeli occupation of the West Bank. The previous administration of Khadoury, he added, was not accepted by the community, and so no one cooperated with it or helped in the development of the college. In addition, the PNA did not have enough time to advertise the programs at Khadoury before the start of the semester of 1995-1996. Moreover, based on their perceptions of the previous administration and status of Khadoury, the communities around were reluctant to encourage their children to join it. One of the main tasks, which the Dean of Khadoury set for himself, was to establish contacts with the community in order to gain support, both financially and morally; another task was to spread information about the new status of the college and to market its programs, in order to reach more students and to attain a larger student enrollment than what it had been that year.

4.6.1 Who Chose What: Regional, Locale, Gender and Stream Differences

Students' choices of institutions were examined in two ways. First, classifying Palestinian institutions into regional institutions, community colleges, and universities/ institutions outside Palestine revealed that students were affected by the location of the institutions, among which they made their choices, as illustrated by the figures in Table 46 below.

Table 46 demonstrates strong differences. Apparently due to physical distance, students tended to select institutions located in their own region: more southern students chose southern universities, more northern chose northern universities, and more central students chose central universities. Because community colleges are concentrated in the center,

Table 46 Differences in Choice of Institution
(Percentages of Region Category)

Region	*Palestinian Universities*				*Community Colleges*	*Institutions Abroad*	*Total*
	South	*North*	*Center*	*Gaza*			
South	26	7	33	0	9	21	100
North	2	48	20	0	9	21	100
Center	11	8	54	0	15	12	100

Chi-Square =211.232388, p =0.00000

more central students than others chose community colleges. Finally, more northern and southern students were interested in education outside Palestine.

Believing that differences between students' choices of different educational institutions, on the basis of whether they were Palestinian universities, or universities outside Palestine, and vocational or technical institutions, would be more revealing of students' attitudes and perceptions, we classified the responses according to this categorization (as shown in Table 47) and then controlled the results for sex, stream, locale and region. Unlike the previous classification (presented in Table 46), the results showed that region was the only category which was significantly related to students' choices. The findings were in favor of our earlier analysis of gender differences; students' choices reflected gendered division of labor, with females being restricted to the private sphere and males having more options related to the larger public sphere. Additionally, differences between students in science and students in the arts showed that more of the former group perceived having access to better life opportunities. Tables 47- 49 present these differences.

Table 47 below shows significant differences in the responses of urban students and students from refugee camps. The figures show that 58% of urban students chose Palestinian universities; in contrast, 69% of rural students and 67% of refugee camp students made the same choice.

Table 47 Students' Choices of Higher Educational Institutions By Locale
(Percentages of Locale Category)

Locale	*Choice Of Institution*					*Total*
	Palestinian	*Arab*	*Western*	*Community College*	*Don't Know*	
Rural	69	8	10	5	10	100
Urban	58	12	11	6	13	100
Camp	67	4	4	13	10	100

Chi-Square =17.51501, p =0.02517

Although the largest number of rural, urban and refugee camp students seemed to opt for education in local universities, refugees students significantly differed in that they saw more opportunities in community college education than did rural or urban students; of the total refugee students living in refugee camps, 13%, contrasted to 5% of the rural and 6% of the urban students, chose community colleges. Unlike urban and rural students, they did not apparently see that they had any opportunities in traveling abroad in search of education and/or work. Only 8% of refugee students saw educational opportunities abroad; more urban students (23%) and rural students (18%) saw that they had the same opportunity.

Differences represented by the figures presented in Table 48 show that 20% more female than male students chose Palestinian universities, and that the number of females who chose community colleges was twice as many. In contrast, males who chose Arab

Table 48 Students' Choices of Higher Educational Institutions By Sex
(Percentages of Sex Category)

Sex	*Choice Of Institution*					*Total*
	Palestinian	*Arab*	*Western*	*Community College*	*Don't Know*	
Females	72	6	5	9	7	100
Males	52	13	16	4	16	100

Chi-Square = 67.18263, p= 0.00000

universities were twice as many as females; male students who chose Western universities were three times as many as female students who made the same choice. More males also reported that they had not decided (i.e. "did not know" or DNK) for which educational institution they would opt.

Table 49 Students' Choices of Higher Educational Institutions By Stream
(Percentages of Respondents – Stream Category)

Stream	*Choice Of Institution*					*Total*
	Palestinian	*Arab*	*Western*	*Community College*	*Don't Know*	
Arts	65	5	10	7	12	100
Science	57	16	11	5	10	100

Chi-Square =30.97495, p =0.00000

Differences based on streaming, presented in Table 49 above, show that more students in the arts opted for Palestinian universities and community colleges; science students who chose Arab universities, were three times as many those in the arts. Almost equal percentages of science and arts students chose Western universities or reported that they were not sure of what to choose.

In general, the findings suggest that all students perceived university education as better and of higher status than vocational education. Furthermore, they seemed to conclude that real investment should be made in science-related fields, and preferably for the benefit of males. Students choices thus reflected a distinction between two groups: the advantaged and the disadvantaged. Female students, students enrolled in the arts stream, and students from refugee camps formed three disadvantaged groups. First, they seemed to see that they had access to more opportunities in local universities than in other places; second, more females than males, and more refugee students than urban or rural seemed to see their educational opportunities in community college education. These findings may be interpreted in terms of education expenses: local university education is much less expensive than education abroad, and community college-type of education costs less than university education or education abroad.

The above analysis shows that students' choices were affected by three interrelated factors: the location of the institution, its reputation, and the areas of specialization it offered. But the more important question is: What was it from the students' own perspectives that generated these attitudes and perceptions of educational institutions ?
The section below offers some answers.

4.6.2 Reasons for Choice of Institution: Gender, Stream and Regional Differences

The reasons which students gave for their choices included: "The institution has a good reputation; it gives me social prestige; it is close or far from my residence; the term of study at this institution is long/short; it is coeducational or sex-segregated; I have a strong desire to join it; it is my family's desire; it has the academic field I like; and it teaches me the principles of religion." The largest percentage of students indicated a single reason; a smaller percentage reported a mixture of choices.

Table 50 Reasons for Institution Choice
Total Percentages

Reasons	*Percent*
Good Reputation	29%
Social Prestige	20%
Close to Residence	12%
Short Term of Study	5.4%
Segregated by Sex	3.6%
Far from Residence	2.6%
Mixed & other	27.4%
Total	100%

Table 50 demonstrates percentages of the top six responses regarding the reasons underlying students' choices of the different educational institutions. The figures indicate that "reputation of the institution" was the top ranking choice and that "social prestige" occupied second position. "Distance from residence" seemed to have quite an impact on students' choices; this supports the earlier interpretation that students preferred to join an institution located in their region. Choice of an institution based on whether or not it was sex-segregated amounted to 3.6% of the responses, which reflects a degree of social and cultural conservatism of the respondents. An interesting finding was that, unlike what was expected, some students chose the institution because it was far from their residence; this seems to indicate that they desired to be away from home or that they were interested in exploring places other than home.

For the purpose of statistical analysis, students' responses were recomputed and recoded into four categories: "socio-personal reasons, distance from home, term of study and do not know (DNK)". Figure 16 demonstrates percentages of students' responses: of a total

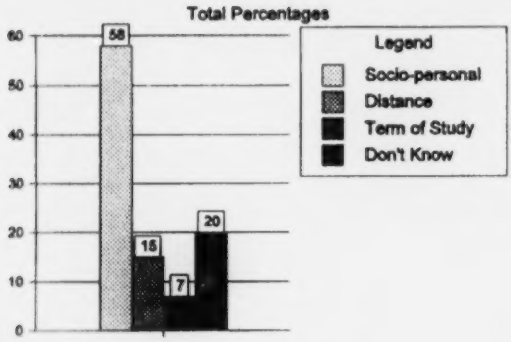

Figure 16 Reasons for Institution Choice

of 832 responses, 58% were motivated by socio-personal reasons, 15% by distance from residence, 7% by length of the term of study at the institution, and 20% reported that they did not know why they made the choice. Controlling responses for sex, stream, locale, and region, the findings revealed that all these variables, except for locale, showed significant differences.

Gender Differences. Table 51 shows differences in the responses of males and females regarding the reasons underlying their choice of educational institutions. Although the differences were not major, they were significant. Of the total, 60% of the males claimed socio-personal reasons, 12% distance from home, 5% term of study, and 22% reported they did not know why they made the choice. In contrast, 56% of the females claimed socio-personal reasons, 17% distance from residence, 8% term of study, and 18% reported they did not know why they chose the institution.

Table 51 Reasons for Choice of Institution
(Total Percentages)

Sex	*Reasons For Choice Of Institution*				*Total*
	Socio-personal	*Distance*	*Study Term*	*Don't Know*	
Males	60	12	5	22	100
Females	56	17	8	18	100

Chi-Square=8.30202, p=0.04017

These differences indicate that girls were not as concerned as boys with socio-personal factors, and that fewer girls than boys were not sure of why they made their choices. What seemed to have been most significant in determining girls' choices of institution was "distance from residence" and "the term of study at the chosen institution." One other possibility which may not be excluded is that these reasons -"distance from residence

and term of study"- could have been economically motivated. A distant institution would be more costly than a nearby one; a university requiring four years of study would be more expensive than a community college where the term of study is only two years.

The finding that more girls than boys were affected by the institution's distance and the term of study there suggests that girls were either confined to the home circle or that they wanted to break away from it; or that they probably knew they had to choose less expensive institutions. They must have been aware that they had to choose less expensive institutions if they desired to continue higher education. Differences in the responses of females and males confirm the claim made by some researchers that, in general, although Palestinians appreciate education and are willing to invest in it, they prefer to invest more in the education of sons rather than daughters. Therefore, in spite of the fact that sending daughters to a higher educational institution is an indicator of a rising interest in educating women, the preference for sending them to a nearby institution would be less costly and would be easier to make them withdraw in case they decide to marry them. Moreover, a two-year college education in a nearby institution seemed to be perceived as adequate for women to secure them future employment in case the need were to arise.

Stream Differences. Differences in students' responses operated by the stream in which they enrolled showed that the dichotomy between the arts and the sciences was in some way similar to the dichotomy existing between males and females. The figures indicate that more students in the science stream than in the arts were motivated in their choices by socio-personal matters; in contrast, more students in the arts than in science were affected by distance from residence and term of study, and fewer of them were unsure of why they made the choice.

Table 52 Reasons for Choice of Institution
(Total Percentages)

Stream	*Reasons For Choice Of Institution*				*Total*
	Socio-personal	*Distance*	*Study Term*	*Don't Know*	
Science	61	9	6	23	100
Arts	57	18	7	18	100

Chi-Square=15.37201, p=0.00153

Regional Differences. The figures displayed in Table 53 present two significant differences: more students from the north than from either the south or the center saw that distance from residence affected their choice of institution; significantly more students from the south than from the other two regions- the north and the center- saw that the term of study at the chosen institution had restricted their choice of the institution. Students from the north seemed to be clearer about why they made their choices; they formed the least percentage of those who chose the category "Don't know."

Table 53 Reasons for Choice of Institution
(Total Percentages)

Region	*Reasons For Choice Of Institution*				*Total*
	Socio-personal	*Distance*	*Study Term*	*Don't Know*	
South	59	11	10	20	100
North	56	24	5	15	100
Center	60	14	4	23	100

Chi-Square=26.26953, p=0.00020

The differences reflected by the students' choice of the category "distance from residence" were highly significant. About twice as many northern students as central or southern thought that distance from residence guided their choice of institution. One interpretation could be that northern students were affected by the economic conditions in the north, which are known to be of lower standards than of those in the center, and to a relative extent those in the south, where businesses and enterprises are mostly located. It is essential to refer back to earlier findings on differences in students responses separated by region. In the section on what students desired to do after they had graduated from high school, responses of northern students were significantly different from the responses of either central or southern students in that they formed the highest percentage of those who desired to go directly to work.

4.6.3 Family Approval of Institution and of Field of Specialization

Having examined which institutions the surveyed students selected, and what they thought had led them to make those choices, we now turn to examine how students perceived the impact of their family on their choices of the educational institution, and of the field of specialization. They were asked if the family's approval of the educational institution conditioned their actual attendance of that institution, and if the family had also to approve of the field of specialization. The results show the following:

4.6.3.1 Approval of Institution: Stream Differences. Frequencies revealed that of a total of 799 students, 60% considered the family's approval necessary, 21% did not, and 23% saw that family's approval was to a certain degree necessary. In other words, 83% of the students perceived themselves as unable to make their choice totally independent of their family's approval. Controlling students' responses for sex, stream, locale, and region, we found that stream alone showed significant differences. Breaking down stream differences for sex, the findings showed that stream differences were maintained among the male students, but when the female students' responses were examined, the findings revealed insignificant differences.

- The results revealed that more students in the arts than in science felt that they needed their family's approval of the institution they planned to join. The same difference

was maintained among male students both in the science and in the arts.

- **Stream Differences**. Of all respondents, 61% of arts students perceived the family's approval as necessary; 20% saw it as unnecessary, and 19% saw a degree of approval was necessary. In contrast, 48% of the students in science saw their family's approval of the institution they selected as a condition to actually join it, 24% of them did not see it as necessary, and 28% saw a certain degree of approval was needed. (Chi-Square= 14.22988, p=0.00081).
- **Stream Differences by Sex.** Of a total of 385 male respondents, 60% of arts students felt they needed the family's approval of the educational institution they planned to join, 25% claimed that family approval was unnecessary, and 16% said that to a certain degree, the family's approval was required; in contrast, 42% of male students in the science stream saw the family's approval as inevitable, 24% said they did not need to get it, and 33% said that they needed a certain degree of approval.(Chi-Square=16.81445, p=0.00022)

4.6.3.2 Family Approval for Field: Gender and Stream Differences. Of a total of 805, 54% of the respondents felt they could not choose their field of study without their family's approval, 29% saw they could do that independently of their family, and 16% reported that a certain degree of the family's approval was required. This again shows that about 83% of the respondents felt that they could not make their choice completely independent of the family. Controlling responses for the variables of sex, stream, region, and locale, we found that sex and stream had a significant relation to students' responses. When controlled for stream separating the sexes, these differences disappeared.

- **Gender Differences.** Though significant gender differences were borderline, they offered a pattern of gender social bias. Of all the respondents, 58% of females felt they needed their family's approval, 25% felt they did not, and 16% saw a certain degree of approval as necessary. In contrast, 49% males reported that their family's approval was required, 34% said it was not, and 16% claimed that a certain degree of approval was required (Chi-Square=7.92283, p=0.01904).
- **Stream Differences.** The findings show the same pattern found above; of all the respondents, more arts than science students saw they had to get the family's total or partial approval. The figures show that 60% of arts students said that the family's approval was a condition to their actual participation in the field of specialization they chose, 24% said that it was not, and 16% said a certain degree of approval was needed. In contrast, 45% of the science students responded in the affirmative, 37% responded in the negative, and 17% said that a certain degree of approval was needed. (Chi-Square=19.01833, p=0.00007).

Students' responses to both questions, the family's approval of a) their choice of institution and b) their choice of the field of specialization, as a condition for continuing higher studies, indicated that students generally viewed an immense impact of their

family on their decisions regarding higher education, and eventually on their future opportunities. Although the choice regarding "a certain degree of family approval" sounds meaningless, it does suggest that these students were aware that their choice of institution or of specialty could not be made apart from the family; after all, they knew that it was the family who would pay for their educational expenses and sometimes made the primary choices for them.

But the question to be posed is: Who was more controlled by the family? Arts students saw that their family had a greater impact on their choices than did science students. Females also perceived a higher impact on their choices of specialty than did males. If we add the percentages corresponding to the response "yes" and to the response " to a certain degree", we find that over 60% of the science students and also of the male students enrolled in the science stream perceived the importance and the impact of their family on their choice of institution and the specialty. About 80% of the arts students felt their family had an impact on their choice of institution, 76% of males enrolled in the arts, and 74% of all females, perceived of the involvement of their family in their choice of specialty.

These findings support our earlier suggestion that students in the arts and female students seemed to form two disadvantaged, but distinct, groups in the society; their life opportunities are more controlled by one social institution or another than those of male students or students in science. Life opportunities of arts students appeared to be restricted by the system of education; and life opportunities of female students appeared to be controlled by the family and by the educational system as well, especially if they were enrolled in the arts stream.

For the difference between arts students and science students, this larger control of the arts may be due to the family's concern about the future of their children, especially that of male students in arts. The future of science students is almost guaranteed, as their educational and career options seem to be clearly defined; science students usually choose academic science tracks which are perceived to lead them to high-status professional occupations. It is also possible, as we suggested earlier, that the family does not perceive good future opportunities for students in the arts stream and thus is not willing to allow its children to make free choices, perhaps due to economic restrictions.

The above results suggest the following: first that more arts students than science students were more controlled by the family, which could mean that either the family did not want to invest in arts students as their study opportunities would be more limited to academic arts or vocational fields. These fields may have been perceived as not worth investing in because, as shown earlier, they were not expected to give access to social prestige or to employment opportunities that would improve one's economic status. In the case of male students in the arts, it may also be possible to say that the family was more interested in finding better opportunities for its children and was willing to invest in their education.

Gender differences seem to hold more than one interpretation, all of which reveal gender bias. First, it is intriguing that significant differences exist in the perceptions of

males and females of their family's role and involvement in their choice of the specialty. This suggests that although females perceived that they were allowed to continue higher education, (more females claimed interest in higher education than males) they felt that they were limited in what or where they could choose to study. They were probably aware that they should choose a specialty "suitable" for them or that they should choose a specialty that was relevant to give them access to the labor force; it is here where the families would intervene and would restrict the choices of their daughters.

4.7 Summary

The data and analysis presented in this section revealed the following findings pertaining to students a) suggestions of fields of specialization they were interested to explore, b) their choice of the educational institution which they were interested to join, c) the reasons which drove them to make these choices, d) their perception of their families' involvement in their decisions. The major findings, all of which were statistically significant, were:

Desired Fields of Specialization.

1. The surveyed students suggested 67 areas of specialization ranging from "astronomy" to "carpentry, beauty care and barber work"; 12% of the total were not sure in which fields their interest lied.

2. Of the 67 fields, medicine, nursing, engineering, law and business administration and accounting ranked as the top five priorities.

3. Irrespective of their sex, stream, region, or local, the majority of the students selected academic science fields: the percentage was 48% a total of 750 students., 28% chose vocational fields, 17% academic arts fields, and 7% commerce fields.

4. Gender differences showed that more male students than female students, 52% contrasted with 44%, chose academic science fields; 10% of all males, contrasted with 5% of the females, opted for commerce fields.

5. Regional differences showed that more students from the south than from the center or the north selected both academic science fields and vocational fields, and fewer of them chose academic arts or commerce fields. The percentages were:
   - 55% of southern students, contrasted with 47% from the north and 41% from the center, opted for academic science fields.
   - 31% of southern students, contrasted with 26% from the north and 25% from the center, opted for vocational fields.
   - 10%of southern students, contrasted with 16% from the north and 24% from the center, opted for academic arts fields.

- 3% of southern students, contrasted with 11% from the north and 10% from the center, opted for commerce fields.

6. Stream differences showed that
   - 71% of students in science, contrasted with 30% of the arts, opted for academic science fields.
   - the choices of the majority of students in the arts were distributed over the different fields: 30% chose academic science fields, 35% academic arts fields, 26% vocational, and 9% commerce.
   - stream differences were maintained when responses were separated for sex: Among both males and females, science students chose academic science fields and choices of arts students were varied.

Choice of institution.

1. The vast majority of students preferred academic institutions to vocational institutions: of a total of 853, 82% chose universities and 6% chose community colleges.

2. Among the Palestinian universities, Birzeit University ranked at the top of students' choices, and among the community colleges, Ramallah Women Training Center occupied the same position, both of them gaining the best reputation, being the oldest and the most well-established institutions, located in the central region in Palestine.
   - Regional differences indicated that students tended to select the institutions located in their own area of residence:
   - Locale differences showed that unlike urban and rural students, students from refugee camps saw their educational opportunities confined to Palestinian universities and community colleges, rather than to institutions abroad.
   - Gender differences showed that more females than males saw that their educational opportunities lied in local institutions; in contrast, more males than female saw them in universities abroad:

     72% of female students, contrasted with 52% of males, felt that their educational opportunities lied in local universities;

     9% of females, contrasted with 5% of males, selected Palestinian community colleges.

     13% of male students, contrasted with 6% of female students, opted for Arab universities, and 16% of males, in contrast to 5% of females, chose for western universities, in contrast
   - Stream differences showed a pattern somewhat similar to that revealed by gender differences. Arts students more confined to local institutions: 65% of them, contrasted with 57% of students in science, perceived their educational opportunities local universities; 16% of the science students, contrasted with 5% of the arts, chose universities in Arab countries.

Reasons for Choices.

1. Students' main explanation of what motivated their choice was the reputation of the institution, and next was the social prestige it occupied.

2. For 58% of a total of 832 students, choice of institution was based on socio-personal reasons.
   - Of all females, 56% reported socio-personal reasons, 17% distance from residence, and 8% term of study at the institution; among the males the percentages were 60%, 12% and 5% respectively.
   - Stream differences reflected a similar pattern: 61% of students in the arts, contrasted with 57% of those in the science, claimed socio-personal reasons; and 18% of arts students, contrasted with 9% of the science, reported distance from residence.
   - Regional differences showed that students from the south were more affected by the term of study at the institution than those from the north or the center; students from the north were more affected by the institution's distance from their residence.

Family Approval of Institution and of Field.

1. The majority of students claimed that they needed to obtain their family's approval of their choice of institution and area of specialization: 54%-60% needed total approval and 16%-23% needed partial approval.

2. More arts students (60%) than science students (45%-48%) needed to obtain the family's approval of both the institution and the specialization.

3. Of all female students, 58% felt they needed the family's total approval of the field of study; in contrast, 49% of the males made a similar claim.

The findings reported above indicate a separation between students on the basis of the streams in which they enrolled and on the basis of gendered perceptions of roles and relations, both of which were related to their own perceptions of their educational and work opportunities. Differences in students responses reflected the following issues:

1. Students perceived continuing education as a vehicle to finding better jobs and to attaining future security. To them higher education meant academic university education, while they perceived VETT as occupying lower status and did not show interest in pursuing it. Differences between students regarding their choices between academic education and vocational education were significantly related to their academic status- whether they were arts or science students, obtained high or low averages, and had high or average/low motivation. In their choices of fields of specialization which they were interested to pursue, students, and even those enrolled

in the arts stream, selected science-related fields. These differences emerged mainly from the streaming system which was found to favor science to arts and to look down on VETT.

2. Stream differences confirmed the bias created by this system. Students in the arts stream reported that they preferred to seek work directly after school; they still felt they wanted to specialize in academic science fields although access to these fields is confined to science students, and they saw their education opportunities more in VETT tracks than did science students. This was a result of their perception of their opportunities- having less chances for education and employment, and their perception of the arts track as being less able to give access to education and work opportunities that are as good as those offered by science. Being arts students, and having more restricted opportunities, their responses also reflected that their family had more impact on them than on students in the science. Apparently families also wanted to make sure that their investment in the education of their children was going in the right direction, and to make sure that their children had access to opportunities that would give them sustainability. Again such an attitude on behalf of the family is a reflection of their perception of the values attributed to science and arts, and the opportunities each offered.

3. Gender differences indicated a dichotomy between male and female students. Females were less directed than males towards opportunities lying in the public sphere. Although a high percentage of them desired to attain higher education, also a larger percentage of them than of males saw marriage as an opportunity after graduating from school. The education structure offers males and females a gendered hierarchy of opportunities. Access to educational opportunities abroad in the Arab and western countries is mainly offered to males, while females saw they had access to local Palestinian institutions. On the level of academic and VETT opportunities, females saw their opportunities more in VETT institutions and males saw them in academic universities in Palestine. In terms of the relation of education to work, males felt that they had free access to the labor market and that they could seek employment opportunities directly after school, while girls felt that one condition to their access to the labor market was attaining higher education, at least at the community college level. In addition more females than males saw that the family had a large impact on their decisions. They saw that the family was expected to interfere in their choice of the field of specialization; this indicates that the family had to make sure that what their daughters chose to specialize in was not in conflict with their conventional gendered role. Finally, females' choices of the educational institution, which they were interested to join, was constrained by the term of study at the institution and by its distance from residence, indicating again that their mobility and their opportunities were more restricted than those of the males.

Regional differences showed that, in general, students from the south perceived fewer opportunities than those from the center or the north. In one way they were ambitious and wanted to achieve social mobility since more of them than of central or regional students selected academic science studies. At the same time more of them saw their education opportunities in vocational studies and institutions within their area of residence rather than in institutions in the center or abroad, reflecting their perception of limited chances and opportunities controlled by their limited mobility and lack of resources. This assumption was further confirmed by the reasons they perceived as underlying their choice of educational institutions and which was affected by the term of study at the institutions. This indirectly explained why more of them than either central or southern students selected vocational education, although a large percentage of them could not explain why they chose academic studies or vocational studies.

V Basis for Students' Assumptions and Perceptions?

The statistical data and the information generated in this study have indicated, so far, that the education system through the policy of streaming and practices of its personnel, and that the family as well had an impact on how the surveyed students perceived of their opportunities. The stream in which students were enrolled affected their achievement, performance, knowledge and their perceptions of their future study and work opportunities, reflecting a negative bias against students in the arts. In addition, gendered patterns of conventional gender roles and relations that were revealed by the findings reflected inequity between male students and female students. Consistently, we found significant differences based on students' sex and stream that indicated inequity between males and females and between arts and science students in their access to resources and available opportunities. Males, in contrast to females, and science students, in contrast to those in the arts, were at a relatively better position and status. These differences demonstrated that arts students and female students had more limited opportunities and less access to resources. In addition, in many cases, regional differences reflected less opportunities for southern students than their peers from the center or the north.

Students' knowledge of VETT and their needs and expectations of this system was found to be poor, and stemming more from informal sources (family, friends and previous graduates) than from schools or community colleges. In this context, students in the arts and female students were at more disadvantage than their counterparts, science students and males. Although the majority of students expressed a desire to continue their education after they graduated from school and selected academic science studies, differences showed that chances of female students were more restricted than those of males due to gendered roles and division of labor. More females than males saw opportunities in academic arts fields and less in science or commerce, the fields that were favored by males. In contrast to males, more of them selected vocational education, and felt that educational institutions accessible to females were restricted to Plaestinian institutions in the order of universities

and then community colleges; more males selected universities abroad and Palestinian university, and their weakest choice was VETT institutions. Females' choices, as they reported them, were determined by the location of the institution, the term of study there and by their family's approval of at the field of study, at the least. Very similar findings were apparent in differences between students in science and students in the arts, with arts students having less opportunities in science-related fields, and in joining academic universities, in Palestine or abroad. They perceived that their family played a larger role in their decisions than did students in science.

Where more females than males saw marriage as a second opportunity available to them after they graduated from school, students in the arts desired to go directly to work as they were not interested in pursuing their education. Males in contrast, saw that work was the second opportunity accessible to them after graduation from high school reflecting gendered roles and relations. Science students who chose togo directly to work after school felt that they their choice was constrained by their family's financial and economic conditions rather than lack of interest in pursuing their education, as reported by arts students who made the same choice. Students' choices of desired field of specializations were based on their perception of what seemed to offer them more access to social and economic mobility. In this respect, differences controlled by sex and stream systematically showed a general pattern; female students and arts students constantly occupied a status secondary to males and science students respectively. This indicated a gender bias in favor of males and against females, which conformed with conventional gender roles and division of labor, and which proved to be held responsible for channelling females into the private sphere and males into the public sphere. It also indicated a streaming discrimination against arts students and in favor of students in science, directing the former group into avenues that would offer them more restricted opportunities than their peers in science.

Based on these data and findings, we came to strongly believe that the educational system, and to a large extent the family, appeared to play a major role in reinforcing the separation between science and arts and between male and female students. The separation of the southern region from the other two regions, the north and the center, is another major issue, and a confirmation of our conclusions regarding it, and which were reported earlier in the study, requires a more thorough research into the roots of the problem. Although we have not carried out extended interviews or researched schooling and the family thoroughly, the findings generated in this research, the data gathered through personal observations of the schools visited, and through meetings with experienced teachers and administrators, and the data obtained through literature review suggest essential conclusions regarding two significant forms of bias: streaming bias and gender bias. An analysis of the two issues, taken up below, aims at reinforcing the analysis and conclusions reached above in giving an answer to the following question: how and where from do students get their assumptions about their future education and work opportunities and about their relation, as a target group, to the system of VETT?

5.1 Streaming Bias

Based on official statistics reported by the Palestine Central Bureau of Statistics (PCBS)[48], not more than 40% of the total number of students enrolled in grade 10 join the science stream; the majority of students go into the arts stream, and those who go into the vocational stream form a minimal percentage. This distribution of students raises an important question: Is it "natural" to have less than 40% of all grade 10 students go into science, while the larger majority go into arts, and the least number of students go into vocational? Does such a distribution emerge from conditions which give students equal opportunities? Or does it arise from explicitly-stated education laws and regulations, or from attitudes and practices of teachers and administrators? Or is it perhaps the outcome of parents and family attitudes and perceptions of educational opportunities?

By raising these questions we do not claim that the majority of students should be streamed into science and not arts or vocational because we believe that science is more valued and is of higher status. The majority of the findings reported above lead us to claim that streaming as a system or as an educational philosophy does not seem to allow equal access to curricula, in terms of exposure to different types of knowledge- science disciplines versus arts disciplines versus vocational field- leading to inequitable future opportunities in two major directions, education and employment. At a very early age, students' future is determined; although students are theoretically or legally given equal access to curricula, in practice only a smaller percentage gains actual access.

The vast majority of the findings in this study, thus far, have shown that streaming into arts or science seems to have a major effect on Palestinian high school students' life opportunities. It seems to have affected their achievement and their performance, their level of motivation and interest in schooling, their knowledge of available opportunities, as well as their choices for future studies or avenues perceived to be pursued. Consequently, a better understanding of the nature of this system emerged. Researching the system of streaming required us to carry out an examination of the rules and regulations that govern its direction, its relation to higher education, and the distribution of students in the different streams. The findings of this investigation were further linked to observations we made during the implementation of questionnaires at the different schools. Our investigation of streaming within this context revealed some issues discussed below.

5.1.1 Streaming Rules and Regulations. Rules and regulations governing streaming in Palestinian high schools are stricter in giving students access to the science stream than to the arts or vocational streams. To enter the science stream, students are required to obtain a passing average of 57.5% in the science subjects (mathematics, physics, chemistry and general science) and they are not to have a failing grade in any subject.[49] Otherwise, they can join an arts or a vocational stream, even if they have failed up to three subjects; in this case, they are given the chance to sit for a make-up test before the start of the new academic year. Mobility from science to the other streams, the arts or the vocational

streams, is permissible by law, while reverse mobility is not allowed.[50] In other words, if students obtain the required score to enter the science stream, they can later on move "down" to the arts or the vocational streams, but if they do not, they may choose either the arts or the vocational, and they are not allowed later on to move "up" to the science stream.

It is to be noted here that 57.5%, the score required for admission into the science stream, is a very low score that reflects a performance level much below average, since the passing score at school is 50%. Accordingly, in theory, the vast majority of students can and may join the science stream. However, it is well-known that students who score less than 75% or 80% in the science subjects in grade 10 encounter difficulties in trying to cope with the curriculum in the science stream in grade 11. For various reasons discussed below, many students, especially those who obtain an average of less than 70% or 75% are discouraged by teachers and school administrators from joining the science stream; in some cases, the family interferes and plays this role. Consequently, in practice, fewer students than what is theoretically allowed or encouraged have access to the science stream, that is to curricula in terms of exposure to different types of knowledge.

In higher education, students are faced with restrictions similar to those found at the high school level because university and college systems are also based on streaming. Science students have access to a wider variety of fields of specialization than arts students; moreover, they have freer mobility between different higher educational institutions and between faculties in the same university, or even across the different disciplines offered within the frame of higher education.

Serious differences in the requirements governing students' admission to universities and community colleges, which offer VETT provisions, seem to emerge from the system of streaming. For admission, universities require averages on the *Tawjihi* (the official General Secondary Examination Certificate) higher than those required by community colleges. Streaming is also reinforced by the varying averages stipulate entrance into different faculties at the same university. The Engineering and Science faculties at Birzeit University, for instance, require students to have obtained higher averages for admission than those required by the Arts and Commerce faculties. Students who graduate with a *Tawjihi* in science can apply to any faculty; students carrying a *Tawjihi* certificate in the arts, however, can apply to the Faculty of Arts, and possibly to the Faculty of Commerce, but in the latter case, a higher *Tawjihi* average is required for admission.

At the same time, community colleges, which are not being perceived as higher education, do not impose high restrictions on admission; almost all of them require similar averages, usually low averages, on the *Tawjihi* across the different fields of specialization they offer. To attract students, they do not set standards that are as high as those set by universities. They also come second rank in assigning their requirements for admission; they await until universities have already set their standards and requirements for admission, i.e. averages required for admission to the different faculties at the universities, then they proceed to set their own requirements, which are usually of lower standards than the universities'. However, like universities, their education system follows

the principle of streaming. For instance, high school students who graduated from the arts stream cannot apply to join most of the science programs, such as electronics or laboratory analysis; in contrast, students who graduated from the science stream have access to all programs, in the science, the arts, or the vocational tracks.

Streaming not only brings about differences in requirements for students' admission to higher educational institutions, but by offering them differential curricula it also predetermines who can join which type of institution, i.e. a university or a community college. Accordingly, students' access to higher education is controlled by the kind of curricula offered to them in the streams in high schools, be they science or arts or vocational curricula. Universities admit high school students only if they graduate from the arts or science streams; graduates of secondary vocational schools are deprived of university education opportunities. On the other hand, community colleges admit graduates of both streams, science and arts, as well as graduates of vocational and industrial schools. The latter group of students has access to higher education at the community college level only, and in a few specific fields of specialization. Upon graduating from community colleges, the majority of graduates have no access to higher education of any sort at the Palestinian universities. Unless they decide to travel abroad to join a European institution, and the majority do not do so because they cannot afford it, their access to higher education, which is likely to lead to better employment opportunities in terms of the type of job or salary it pays, and perhaps to a better life, is hindered.

5.1.2 Access to Mobility. As shown below, the philosophy of streaming implemented at the school level is extended to higher education, although higher educational institutions have the option of following a more flexible philosophy and setting up a more flexible admissions' policy that would offer students more equal opportunities than what is presently implemented. Higher educational institutions do have the authority to design their own philosophy and their own policies, but efforts in this direction have not been exerted yet. Being restricted by the principle of streaming, higher education – universitates and community colleges- restrict further students' opportunities and reinforces inequity.

As clarified above, mobility between streams is a one-way "downward" movement. Science students can transfer to arts or vocational streams and arts students can transfer to the vocational/industrial stream. However, movement in the opposite direction is not permissible: students in the vocational stream do not have access to the other streams, and students in the arts cannot transfer to the science stream. Mobility between universities, and community colleges and between faculties at the same university, is by rules and regulations a one-way track; it allows "downward" but not "upward" movement. For instance, a student admitted to a university can later on transfer to a community college; however, once admitted to a community college, his/her chances to transfer to a university become impossible. If a student is interested in transferring to a university, she/he will be required to go through all admission procedures that any new student goes through. Similarly, mobility between faculties at the same university is a also a "downward" movement. A student admitted to the school of engineering can later on transfer to any

other faculty he/she chooses, while an arts student's mobility is highly restricted to the Faculty of Commerce, if she/he meets its requirements which are sometimes limited to obtaining high scores in a subject like mathematics.

The data and information generated in our study reveal that streaming represents a major structural bias which was also reflected in the responses of the surveyed students, and which seemed to affect their attitudes, perceptions and practices. Access to different streams means access to different curricula at school, and to different fields of specialization at higher educational institutions later on. Science is attributed high status values; it is more appreciated and more valued than arts or VETT streams, as it is assumed to give access to more opportunities. Thus students in the science stream have a wider range of opportunities at several levels than those in the arts or vocational streams; gaps in opportunities appeared at the level of the institution, the faculty and the field of specialization. Opportunities accessible to arts students are more limited; to VETT students, they are even narrower. This means that streaming creates inequitable conditions in which students, far too early in their lives, are exposed to different types of knowledge and are helped to develop different skills. Such inequitable conditions limit the opportunities of some students and expands those of others.

Under such a streaming system that starts in grade 10, the relationship of the student to the world of work is predetermined. Streaming predetermines whether or not students can go into higher education, and to which kind of higher education they may have access, far too early in their life, which results in creating inequity among high school youth. Subsequently, the type of higher education that many young people attain determines their future employment opportunities. Examining community college and university policies within the context of streaming offers an ironical case showing a contradiction between the stated policies based on streaming and practice. Based on the principle of streaming, and as per rules and regulations governing mobility between streams at schools, community colleges and universities, a graduate of a VETT program, either at the secondary level or the community college level, may attain higher education at a vocational or technical institutions in Germany or any other Western country, and upon graduation he[51] is very likely to be hired as a faculty member at any community college in Palestine. However, that same graduate is banned access to higher education at the Palestinian universities because regulations stipulate that. Consequently his chances of getting employed are limited to jobs requiring semi-skilled laborers, in case of a vocational school graduate, or mid-level professions at schools or companies, in case of a community college graduate; moreover, he has no chances of improving his professional status or his economic status.

5.1.3 Theoretical Access vs. Practical Access. According to the education laws and regulations applied at school, all students have access to streaming – i.e., access to the same curriculum in terms of exposure to similar types of knowledge. However, actual access does not seem to be totally confined to or stipulated by laws and regulations, regardless of whether these laws and regulations were issued by the Jordanian Ministry

of Education, or the PNA Ministry of Education or by higher educational institutions themselves. What appears to be in effect, and perhaps more dangerous than laws and regulations in limiting students chances and in creating inequitable opportunities, are attitudes of officials, administrators and families, as well as certain infrastructural factors, such as space, facilities, and finances.

We were informed that streaming into science is subject to the capacity of schools which mainly caters to students in the science stream, and it is also subject to the availability of such schools. In general, there is a limited number of schools that offer students access to the science stream, because it minimally requires space and laboratory facilities. Taking a decision to add grade 11 arts or science to a school which caters to students up to grade 10 only, or to open a new section of the same class on the basis of an increase in the number of students seeking access to the science or arts stream in the san\me school, is often triggered by factors that are not academic. For instance, decisions as such are dependent on whether or not the community in which the school is located can afford to provide the infrastructure for such a development, or whether or not they see the need for it, or whether or not the Ministry of Education has adequate financial budgets and staffing.[52]

In many cases, enrolling in the science stream is highly competitive if the capacity of the available science section (or sections at the same school) is limited; this is usually the case in large cities and villages. In a smaller village or a distant one, the number of students enrolled in a science section may not reach the minimum number required to have a section, so competition disappears; in this case, high school administrators and teachers would encourage students, irrespective of their abilities and scores in the science subjects in grade 10, to enrol in the science stream. In contrast, they may encourage students to go into the arts stream rather than the science stream even if the students show very good performance and are well-qualified to enrol in the science stream. If the school has a limited number of science sections and a large number of students, then it cannot accommodate student needs.

During school visits, our observations of the attitudes and practices of teachers and administrators revealed their biased perception of streaming: science students were more at an advantage than arts students. Teachers' as well as students' perceptions of streams were reflected in how each group of students dealt with the questionnaires, and how teachers responded to them or commented on their performance. Information generated here confirms and reinforces the findings based on the statistical analysis reported in the previous sections, which indicate segregation of streams into advantaged and disadvantaged groups. Arts students seemed to have internalized what others think of arts students- they are weak, slow, lazy, unskilled, unintelligent and so on- and had more trouble than science students filling out the questionnaires. In many arts classes we visited, especially in large rural schools, students in each section averaged about forty; in one school the number reached 45 students. Completing the questionnaires took 25-30 minutes in the science classes; in the arts classes, it took 40-45 minutes and sometimes a full hour. Students in arts classes were quieter and asked for a lot of assistance; they continuously

asked questions, even about simple and clear issues. In contrast, students in science classes were more active, and even rowdy at certain points, especially when they were given instructions; however, the questions they raised were few, and they raised them during the first 10 minutes.

It is not claimed here that students ought not to ask questions or seek clarifications because raising questions helps them develop their thinking and analytical abilities. However, the way students dealt with the questionnaires reflected that they were unable to work independently. The task of filling out the questionnaires form, in fact, required the students to work independently and to provide information about themselves using their own knowledge and judgement; the questions included did not have a single "correct" answer. However, students' attitudes and practices, and more so among the students in the arts than those in the science, revealed their dependence on the teacher and their lack of ability to deal with questions or exercises that were different from what they were accustomed to. Such attitudes originate from the attitudes and practices of school teachers and administrators and from the teaching methodologies they use. Students in the science stream did not experience heavy interference from the teachers in order to check on their behavior or their ability to answer the questions; in contrast, teachers tried to make sure how students in the arts answered as if they wanted to avoid being embarrassed by their performance.

Through our observations of students' attitudes and practices during data collection we noticed that, in general, they were not accustomed to questions that allowed for a variety of answers; they had difficulty in treating the questionnaires as a non-exam exercise; they kept looking for reassurance and seeking clarifications. One teacher at a boys' school in the south, commented that students were not trained to think and to analyze; they were only accustomed to rote memorization. Also, in almost all classes students started to fill out the questionnaires without listening to all of the instructions. They did not read the instructions carefully although they were typed in large bold print. As they continued filling out the questionnaires, they constantly asked questions about the clearest instructions. In addition to that, several teachers tried to read students' answers while students were completing the questionnaires to make sure that the answers their students gave were "correct" ; some even tried to give the students answers which they thought were "correct". In many schools, the principals and the school teachers were not present during data collection; however, they came to class several times to see if order and discipline were observed.

These attitudes and practices, which were more common in arts classes than in science classes, suggest that students expected an invariable form of examination and expected the same types of questions; exam questions, to them, seemed not to have more than one "correct" answer. Therefore, when they took an examination, they probably did not feel the need to read the given instructions. This impression was revealed while students were filling out the questionnaires; they did not read the instructions, but they kept asking for directions. Apparently, students treated any written activity that included questions as a test. Studying at school was clearly dependent on memorization skills rather than on

analytical and higher thinking skills. The belief that students in the arts were not intelligent enough or slow or weak students probably resulted in the arts students becoming more dependent on the teacher than the science students, and giving the science students more confidence and challenge to develop and improve.

Teachers and principals at most schools visited complained about the abilities of arts students. Some described them as slow and having poor comprehension abilities; some felt apologetic that their students took too long to complete the questionnaires, which they justified by referring to the difference in abilities between arts students and science students. We were told by a good informant that teachers did not like teaching students in arts and they found it hard and not rewarding; in fact, she added that teachers often described students in the arts as "slow", "dumb", "retarded" or "illiterate". Attitudes and practices, as such, are an expression of a "hidden curriculum" that teachers and administrators seem to follow. Their biased assumptions against students in arts were obvious, although they might have expressed them unconsciously. The belief that students in arts had lower performance levels and poorer comprehension skills than students in science, and were perhaps not as intelligent, drove them to treat arts students as "deprived" learners but did not seem to provide them with "special" care and attention. These assumptions and perceptions of students in the arts versus those in the science may also be a reflection of a reality created by streaming and by the educational conditions that result in such a gap between knowledge and abilities of students in the different streams.

A situation revealing the use of "hidden curriculum" was reported by the same informant, referred to above. The informant gave an example of how school teachers and administrators perceived arts students. She explained that some principals of schools catering to arts students strived to open classes for science students only for ulterior motives, or for competition purposes. They believed that at the end of grade 10 their best students would transfer to schools that cater to science streams, and they would be left with "arts" students. The fact that their schools had only arts classes meant to them that the *Tawjihi* results would not give them the same good reputation a school with science classes would gain. Success of students in science is expected to bring more fame and more pride to the school than success of students in the arts stream. Such an attitude on behalf of these administrators is another manifestation of the "hidden curriculum" to which the arts and science students are subject to at school, and which seemed to participate in constructing their perceptions of streaming,and contribute to their internalization of the values associated with each stream.

Another form of the use of "hidden curriculum" was expressed in the gap between theory or stated policies- represented by rules and regulations- and practice. One informant explained that school administrators did not strictly observe the rules and regulations directing streaming. In fact, some prevented or tried to discourage students from joining the science stream if they had borderline averages because they believed that, in the long run, this would be to the students' benefit. The fact that streaming students in certain cases was controlled by infrastructural factors and school capacity (as discussed above) was another indication of the gap existing between theory and practice. Although

theoretically about 60% of a certain 10th grade section might have been eligible to join the science stream, only about 30%-40% of them actually do, and often some of these students would later on transfer to the arts stream.

5.1.4 Structural Bias and Family Attitudes and Practices. As shown above, practices, perceptions, and attitudes of school teachers and administrators reflect the values associated with streams; science, being considered more important than arts, was given more attention; both arts and science streams were more appreciated and valued than VETT streams. Subsequently, this structural bias seems to extend to families.

Observations at schools and meetings and interviews with school personnel revealed that the attitudes and practices of those involved in the educational system, particularly as reflected in streaming, seem to affect both students and their families. One informant reported that parents often insisted that their children go into science even when their average in the science subjects did not exceed the minimum requirement, which indicates that parents also perceived science as a track for more intelligent and capable students, which would offer their children better opportunities than would the arts or vocational streams. The family seems to interfere in the children's decisions or desires regarding the stream in which they desire to enroll, and the area of specialization or the institution which they would like to join. The earlier findings of this study demonstrated how students, in general, felt that they were unable to take decisions regarding their higher education independent of their families.

Considering science a more useful field than arts, parents and senior family members may decide for their son to go into science, or may send him to an arts section when they cannot economically afford sending him to a high school in another town or city. They may also decide to send him to a VETT institution, if they need him to help earn the family's living; this kind of education is not time-consuming and could reward the family with immediate revenues for investment. These practices are applied to female students as well; in addition, parents may also disapprove of their daughter leaving the village to join a science class in the city, if the school in the village does not cater to the needs of students interested in joining the science stream. The parents may also feel that it is dangerous for their daughter to commute, or that it is too expensive to send her out of the village, especially if they believe that education in the arts stream is adequate for women.[51] This kind of education would be adequate to give women access to professions, like teaching, which are perceived as suitable professions for women; if they got married and had to work and raise the children, they would not face a lot of problems because their working hours and their holidays would be concurrent with their children's schooling hours and holidays.

Our investigation of streaming which followed statistical and content analysis of the data generated from field work did not reveal gender differences within the context of streaming. The nature of the study and the research design was not set to capture differences between males and females within the science stream or within the arts stream. We can just refer to one indicator of their presences which is related to our

sampling procedure. In drawing our sample for this study, we were unable to locate any female school in the central region that caters for females in 12 th grade in the science stream except in the city of Ramallah. As for boys, there were schools in the city and the villages around Ramallah. If this indicates anything, it reflects the gendered perception emerging from the streaming system. Science is a track perceived as more appropriate for males than for females, as they are perceived the producer and perhaps the thinkers, since it is also perceived as more valued and as the track giving access to employment. At this point we cannot confirm or disconfirm the presence of gender differences within the individual streams; such an assumption requires a different kind of investigation of the system.

In brief, the factors governing student streaming reside outside rules and regulations and beyond lowering or raising the average required of the students to gain access to the science stream. Theoretically, lowering the required average from 70% to 57.7%, the decision taken recently by the PNA Ministry of Education, gives access to the science stream; in practice, however, access seems to be restricted by biased attitudes, perceptions, and practices built in the structure of the educational system and revealed to be participating in forming and structuring the attitudes and perceptions of students and their families.

Streaming, in fact, appears to have a major role in predetermining students' life opportunities from an early age; it also indicates class and gender biases. Although not stated explicitly in the education law, streaming offers inequitable opportunities to the entire student population as a function of social and economic factors, and to female and male students in particular, as a function of gender factors. When asked about their field of preference, the majority of students tended to choose fields in the areas of academic sciences and technology despite the track they were enrolled in because apparently they were aware of the opportunities such fields can offer them. As expected almost all science students opted for academic science fields and very few students chose vocational fields. Surprisingly, however, a significant number of the arts students, particularly those obtaining high averages, opted for academic fields in science and technology, although they were aware of the fact that students in the arts cannot go into science and technology at any Palestinian university or community college. These choices seemed to be based on the assumption that science and technology, rather than academic arts or vocational fields, offers access to a wider variety of jobs that would result in better pay and higher social status.

Within such a framework, it is not surprising that the vast majority of the science students in the survey were in favor of academic science fields, and about a third of the arts students still chose academic science fields, although they were certainly aware of the fact that mobility from the arts track to the science track was not permissible, neither in high school nor in higher educational institutions. Such a system is impotent and obstructive in providing equal access to and control over educational opportunities in the short term and life opportunities in the long. It seems unreasonable to believe that students' future can be determined based on their achievement at an age as young as 15 years. At

this age, students are moving out of childhood into adolescence. As it is universally known, this is a stage at which children or young adolescents have not yet fully developed physically nor psychologically. In addition, school curricula, teaching methods, overcrowded classrooms, and pass and fail rules and regulations (all of which are beyond thorough discussion here) all contribute to providing unequal opportunities for the various members of the society, especially because attention is targeted more to students in science than to students in arts or vocational streams.

5.2 Gender Bias

The assumption that science is primarily a male path, seems to emerge partly from the structure of the educational system, as well as from the practices and attitudes prevalent in the educational system. Gender bias is explicitly expressed in the academic and VETT post-preparatory system. For instance, in the process of identifying the sample for the survey, we were surprised to see that science schools for females in villages were rare. The central region, excluding East Jerusalem, had only one rural science class for females in grade 11; another one was in a mixed school, with females forming a small minority. In the academic year 1996-1997, three science 11th grade classes were opened in three villages in the central region; two were in boys' schools and only one was in an all-female school. Moreover, of the 15 VETT secondary (vocational, industrial and commercial) schools, females are targeted by two only that offer nursing and secretarial work.[54]

The educational system and the family seem to be also responsible for the attitudes and perceptions students have regarding what is considered "masculine" or "feminine". As indicated by the findings of this study, Palestinian education in general, and science in particular, is first for males and females come second in rank. Although excluding females officially from their right to education is not allowed, attitudes and practices of providers and implementers- school administrators, principals, and teachers- as well as attitudes and practices of the family, are crucial in maintaining a dichotomy between the private world and the public world, the "feminine" sphere and the "masculine "sphere.

Through examination of the subjects taught at school and the distribution of time allotted for these subjects, we found a major gender difference which although on paper may appear minimal. Differences in the core subjects are not gendered; they are streaming differences. Curricula differences lie not in what is taught to males or females as much as in the curriculum designed for the different streams. Male and female students have access to the same core subjects, or the same basic curriculum. However, differences lie in the curricula given to the arts classes and to the science classes., and gender differences lie in the curricula designed for the "marginal" subjects[55], such as "vocational education", "home sciences" or as it is often called "home economics", and "agricultural education" as well. The examination of certain official documents issued by the Ministry of Education and the linking of those to the observations we made during school visits allow us to make the following points:

5.2.1 Course and Study Plans. The "study plan" [56] for basic education (i.e., from grade 1 to grade 10) applied in the West Bank does not indicate any differences in the subjects offered or the time allocated for these subjects. All students, males and females, are required to study four "marginal" subjects: vocational education, art (i.e. drawing and crafts making), physical education, and music and chanting/singing; "computer skills" started to be offered in grade 10 only.[57] As designed, theoretically, the study plan is a step towards equity; all girls and boys are expected to be exposed to similar curricula and to develop similar kinds of skills. However, it is questionable whether or not equity will be actually realized, because it is expected that schooling embodies some form or another of "hidden curricula", as was shown in relation to streaming. During the workshop held on VETT at Birzeit University, in May 2 1995, the Director General of VETT at the Ministry of Education and Higher Education was enthusiastic to announce that gender differences will soon disappear as the Ministry was planning to start offering vocational education for all students, males and females, starting early in the basic cycle. When asked if the curriculum to be used was unified for both sexes, he said that currently it was different for the separate sexes. However, he welcomed the suggestion that this issue ought to be followed up to guarantee equal opportunities, in terms of exposure to similar type of knowledge and development of similar skills, for both sexes. Taking a stand in favor or against this plan requires a thorough study of its implementation, especially of the curriculum applied and the practices of the teaching staff, a task not within the frame of the current study.

The study plan for the secondary cycle offers an example of gender bias underlying the educational system. In grade 11, all students study an equal number of subjects in an equal number of hours. The "minimal" difference appears in the subject "vocational education."[58] However, here a spade is called a spade: males study "vocational education" and females study "home sciences / economics." In grade 12, vocational education is not any more required of male students, while "home sciences" continues to be required of female students. Thus, males in the arts are required to take a total of 27 class contact hours to study disciplines like geography, history, languages, and religion; males in the science are required to take 31 class contact hours to study science disciplines, mathematics, language and religion. In contrast, females in the arts are required to take a total of 28 hours class contact hours and those in the science 32 class contact hours. The difference between class contact hours required by males and by females accounts for the subject of "home economic" for females only.

Although Gaza Strip was not included in this study, it is essential to point out how the study plan implemented in the schools there expresses gender bias more clearly than that implemented in the West Bank. In the schools of Gaza Strip, girls have a higher load of subjects and contact hours than boys, resulting from the fact that the annual "study plan" lists "home economics" as a subject to be taught to females only. "Home economics" is first offered to students in grade 3 and continues to be offered through grade 12. It is allocated one hour per week in grades 3 and 4, two hours per week in grades 5-10, and

four hours in grades 11-12. Males are taught agricultural education in grades 3 through 9, and time allocated for it is one hour a week.[59]

5.2.2 Married Female Students. One education rule, issued by the PNA Ministry of Education and Higher Education, indicates a form of gender bias which may be perceived as positive bias towards female students, considering that this rule does not apply to male students. The rule states that if female students get married before completing high school, they are allowed to continue high school education in public schools, if they choose to do so.[60] A rule of this kind indicates the Ministry's promising attitude towards women's education and towards equating girls with boys at school. Such a rule targeted girls and would never consider boys, based on the constructed assumptions of "feminine" and "masculine" roles and relations. Whether married or unmarried a male student can proceed normally in his life and would not be deprived of what is considered a basic right. Although this rule may be seen to reflect a reform of some kind of bias, its practical enforcement law is apparently left to the discretion of school administrators and teachers, and in certain cases to the influence of the community.

During our visit to two all-female schools in the south, we discovered that there were about 10 married students in each of the schools. During our visit to an all-female school in the central region, we found that the school had no married students among its student population. In an interview with the administrators of the school in the central region, we were told that they were reluctant to accept enrollment of married students. They believed that socially this would have a negative effect on other students; the most unacceptable condition for them was having to deal with pregnant (married) students. They told us that on one occasion, they were pressured to accept a married student, and after long negotiations with the student's family, they accepted her on one condition: the family had to sign a written commitment that the student would not get pregnant as long as she was in school. The fact that school personnel felt it proper to report such events is an indicator that the impact of individuals' attitudes and practices is indeed stronger than the existence of a law or the implementation of that law. The interviewee added that accepting or refusing the enrollment of married female students was subject to the social conditions of the town or village, location of the school. She explained that in the south, for instance, individuals with social status and extended-family relations were very influential, and thus, school principals were made to accept married students in schools.

This gender bias in dealing with female married students as a category separate from male married students reflects the gendered perceptions of policy makers, school administrators and even the families. This indicates that females are responsible for keeping traditions and for promoting discipline and good manners, and so their enrollment as married students raises some reservations; the attitudes and practices of school administrators, that is being afraid that the married student would discuss married life among young unmarried girls, and thus should not be allowed to enrol in school reflect this gendered perceptions of the roles of males and females. Married male students do not seem to raise questions; it is acceptable if boys discuss married life but it is not an

acceptable behavior of girls. Boys are not responsible to maintain discipline, good manners, and traditions while girls are. What ought to be considered here is the importance of education to women and the impact of early marriage on their social and health conditions, rather than making them only bear the responsibility of keeping traditions alone. The actual impact of such a law- allowing married female students to continue their high school education is bifold. It recognizes their right to attain education, and it gives them better opportunities than they had in its absence. On the other hand, it encourages early marriages as families and girls themselves would be convinced that marriage while being at school would not be in the girl's way to finish her education.

5.2.3 School Uniform for Females. Another rule pertains to school uniform, issued by the Ministry of Education and Higher Education; the rule requires school girls, in the West Bank and Gaza Strip, to go on observing the law of wearing a special school uniform, the uniform they have been wearing for over two decades.[61] A law as such looks simple on the surface, seemingly that all it aims at is maintaining order and discipline, and perhaps avoiding competition over clothes. However, examining the rule more deeply uncovers its gender bias. Although we cannot object to order and discipline at school, we question why girls only ought to observe it. Twenty years ago, male students at public schools were also required to wear unified uniforms. Requiring girls **only** to wear a uniform reflects how women are perceived: "women ought to be obedient; they are responsible for keeping order ; they are interested in clothes, in wearing beautiful clothes and in wearing a different outfit every day". Such perceptions highly likely indicate that women can be concerned only with superficial issues.

Observation of visited schools revealed that the enforcement of this law- requiring female students to wear a uniform- varied from one school to another, especially when it came in conflict with wearing the Islamic traditional dress- the *hijaab and the jilbaab*. In the all-female schools, some girls went to school with their Islamic dress, and others wore the school uniform; on the other hand, without exception, all girls enrolled in mixed schools wore Islamic dresses. In one of the schools in the north, all students wore the school uniform and a head scarf; the school director explained that wearing a head scarf in the village, the location of the school, was not a village practice. Those who wore it came from another village where wearing a head scarf was an accepted implicit rule, or was considered the norm. In another school in the center, the students wearing traditional Islamic dress were required to wear a unified color, (a white *hijaab* and a navy-blue *jilbaab*); in a southern school, all students wearing this dress were required to take it off and stay in their school uniform as soon as they stepped into the class; they could keep the head scarf on, but it had to be white.

In three mixed schools, however, we noticed that the uniform law was not observed. Apparently a stricter cultural law was observed; without any exception, all girls were wearing the Islamic traditional dress. We were reluctant to raise the issue with the school principals. However, observing certain school practices revealed interesting features. All girls in two mixed classes were physically separated from boys by quite a distance; the

boys were sitting in the front seats in the class, at regular school tables or desks while the girls were squeezed next to each other, pushed against the back wall and sitting in less comfortable seats. During the break, male students were active, chaotic and having a normal break-time; females were walking in pairs in a long outdoor corridor in front of the classrooms; they were carrying their books, trying to study. According to a teacher informant, this form of separation, boys to the front and girls to the back, was an unwritten law in mixed classes. However, we should note that in the third mixed school, one third of the students in the *Tawjihi* class were females; in terms of seats and space provided for them, they were treated equally with boys.

The findings reported in section IV, Survey Results of part 2 of this study, and those reached in the section presenting a discussion of streaming bias and gender bias, indicate that, overall, the surveyed students are segregated into advantaged and disadvantaged groups. This segregation emerges from two socialization structures, the education system including VETT, and the society, represented by the family and the social circles around the students. In general females, students in the arts, and southern students are disadvantaged while males, students in science, and northern and central students, are a more advantaged group. This segregation apparently emerges from the social structures-the education system and the students' social circle, represented by the family. Consistently the results showed that there were differences between male and female students based on gendered patterns of roles, relations and needs, as perceived by the education system, the family and the students themselves. Streaming differences were also very strong, reflecting that streaming had larger impact on students' opportunities than did the students' socio-economic background, for instance. Although regional differences were not as strong as gender and stream differences, they seemed to affect students' future chances in different ways.

Gender differences were so strong and were significant in most of the relations revealed by the data analysis. They were most apparent in students' responses pertaining to their future opportunities, in general, and to opportunities in education and employment in particular, reflecting students' perceptions of what is "appropriate" for males and for females. Assumptions and perceptions of students regarding their opportunities and roles are structured through rules and regulations applied in schools and through the practices of personnel involved in the education system, and through beliefs and practices of the family. These differences were represented by students' knowledge and awareness of VETT provisions and services, by their suggestions regarding services they expect from the VETT and education systems, by their perceptions of the relation between education and employment, in terms of the available fields of specialization and educational institutions, and finally by the perceived impact that their family had on their choices regarding what they could specialize in and which institution they could join. These gender differences were constructed and reinforced by rules and regulations, such as those pertaining to married students and school uniform, and which were applied exclusively to female students. Moreover, they were structured and reinforced through the use of hidden curricula represented by practices of educators.

The revealed gender differences strongly suggest two separate worlds: the public sphere, the sphere of production involvement in social and economic activities, is for males, and the private sphere, the sphere of biological reproduction, domestic affairs and caretaking activities, is for females. Although the findings showed that female students were anxious to go into higher education and to seek work afterwards, their own perceptions and the perceptions of the male students reflected that their opportunities within the public sphere were restricted to gendered roles and gendered division of labor, which were an extension to the reproductive and caretaking role socially designed for them and expected of them to play.

Stream differences, on the other hand, reflected that the system of streaming defines and restricts students' future opportunities in education and in employment; the impact of the system of streaming was so strong, in certain cases, that it was reflected in students' responses irrespective of their sex, region or locality. These differences were apparent in students' responses pertaining to their academic status and their future education and work opportunities. Consistently, it was found that students in science were in a more advantaged position than those in the arts. This was reflected in their knowledge and awareness of VETT provisions and services, in their needs and expectations from VETT, and in their ability to identify these needs and expectations. Stream differences were constructed by rules and regulations governing the direction of schooling, particularly streaming. Furthermore, perceptions and practices of educators and their use of hidden curricula increased the gap between students in the arts and those in the science stream.

Regional differences reflected a gap basically between students from the south and students from the center and the north. These differences were most apparent in how the surveyed students perceived their opportunities. Although they felt that they were reached by the system of VETT, they were not sure of their future needs and expectations of this system. Their knowledge and awareness of its provisions and services were confined to what they saw available in their own region. Their perception of the type of education they wanted to seek, and the fields of specialization that they desired to join and that would give them work opportunities reflected high ambitions that do not match reality. Moreover, it reflected more conservatism and less integration of the south in the development plans and programs than their peers in the center or the north.

In our view, this situation of the south emerged from three main factors: first, on the universal level, the southern regions are usually the most conservative because they are not well-integrated in the development process, and the south of the West bank is not an exception to this trend; second, the political changes that are resulting from the implementation of the Oslo Peace Accords between the Palestinians and the Israelis, and the Israeli military practices reflected in banning access to Jerusalem, and controlling movement on the roads between the different parts within the West Bank, and between the West Bank and Gaza Strip resulted in isolating the south, and in depriving it from contact and access to available opportunities in a more serious way than it did for the north or the center; third, the maldistribution of wealth, especially that flowing from the donor countries, and its concentration in the central region, deprived the south from

having access to emerging opportunities, be it in education, training, work or exposure to the outside world.

Notes

1 Footnotes in this part of the study start with a new number. In addition, there will be no mention of names of informants or schools, that were involved in providing data and information, because they were promised confidentiality when the findings of the study were ready to be reported.

2 Ministry of Education and Higher Education (MEHE), Palestinian Central Bureau of Statistics (PCBS). *Educational Statistics Yearbook 1994/1995*, September 1995, p. 26.

3 *Ibid.*, p.26

4 UNESCO. "Primary and Secondary Education in the West Bank and Gaza Strip: Overview of the System and Needs for the Ministry of Education." June 1995, p.21.

5 *For detailed information on streaming, see section IV, subdivision 4 above.*

6 MEHE, PCBS. *Educational Statistical Yearbook 1994/1995*, September 1995, p.26

7 MEHE, PCBS. Education Statistics Chart of Data, 1994/1995.

8 UNESCO. "Primary and Secondary Education in the West Bank and Gaza Strip: Overview of the System and Needs for the Ministry of Education and Higher Education ", June 1995, p. 22.

9 Observation was concerned with school and administration-related matters, the time the students required to complete the form, the way they handled it, and the issues they raised in questions.

10 A constraint of this type was faced when we obtained statistical data for the Ramallah district. The statistical data obtained showed that none of the rural female schools catered to science students; accordingly, the sample for Ramallah district did not include rural female science students. However, when we visited one of the girls' schools in the rural area of Ramallah to implement the questionnaires, we discovered that a science section had just been opened. We had to comply with the sample designed as it was too late to redo calculations and sampling.

11 Research teams had to be formed and trained three times. Some could not complete the work because of mobility restrictions; others had to quit because data collection was delayed by serious bureaucratic measures and the complications involved in gaining access to schools, military closures, student strikes, employee strikes, Parliament elections and other events. Theoretically, such events would sound everyday simple difficulties, yet in fact they had a serious negative impact on conducting the study.

12 FAFO – report 151, Marianne Heiberg "Population Characteristics and Trends", *Palestinian Society in Gaza, West Bank and Arab Jerusalem, A Survey of Living Conditions*, 1994, p. 45.

13 As reported in the FAFO survey, "one out of four persons in the West Bank is an UNRWA refugee, and more than two out of three refugees live outside camps. " (FAFO -report 151, 1994, p.41). That is around 12% of West Bank refugees live in camps. Our study, the distribution of the surveyed students over locality is not the same as it is across the population or as it is reported in the FAFO survey. This is due to the sampling procedure followed in our study which was not concerned with a stratification representing residents' distribution over locality across the entire population. The study's concern was to have a sample of rural and urban students which would be sufficient to draw some comparisons.

14 FAFO – report 151, Rema Hammami reports around 37 % of all the females in the population got married before they turned 17(p. 289) and that 10 % of the women who were 13-17 at

the time of the interview were married, (p.290), 1994.

15 *Ibid.*, p.131; p.138.

16 Information was obtained during an interview with Mr. J. Zakarneh at the PNA Ministry of Education and Higher Education, when we requested a written document regarding the Jordanian law for female married students.

17 PNA Ministry of Education and Higher Education. "Married Female Students", a memorandum from the General Director of Education in Ramallah district, # 18/100/3088, 11/21/1995.

18 *op cit.*, FAFO p. 131.

19 Education and Higher Education Laws no. 16, Chapter five, item 15, p. 20, 1964.

20 *Ibid.*, item 17, pp. 21-22.

21 *Ibid.*, item 19, p. 22.

22 This information was obtained through an interview with the secretary at the Ramallah Girls' Secondary School and another with a well-informed experienced teacher at Al-Bireh Girls' Secondary School. The data were confirmed by Mr. J. Zakarneh at the MEHE.

23 PNA Ministry of Education and Higher Education. " Regulations for Streaming into Science, Arts and Vocational for 10 th Graders, 1995-1996 ".

24 The PNA Ministry of Education and Higher Education. " Pass, Fail and Make-up Rules and Regulations for the Year 1995-1996; 351/6/8778, December 25, 1995.

25 The list of areas of specialization was obtained from the Directorate of VETT, at the PNA Ministry of Education and Higher Education during an interview with the assistant of VETT Director General, in August 1995.

26 Table 6 in appendix 2 presents the 40 fields of specialization and shows significant and insignificant differences in male and female responses regarding their awareness of the existence of these fields.

27 The interview with the Dean of Khadoury was carried out in September, 1995, at Khadoury Community College.

28 The interview with the Dean and Programs Coordinators at the Polytechnic, in Hebron, was carried out in August 1995.

29 Note that all mixed sources without exception included schools among them. Also, 5% of all respondents seemed not to have understood the question and so they reported "informal sources".

30 Among the interesting extra-curricular activities enumerated were two: one was holding lectures and panel discussions on topics like women's social and Islamic rights; the other was elections and the importance of women's participation in the elections. At this school, they have a tradition of calling classes by special names; each class chooses its name, (such as "spring flowers", "the moon" and "the flower of all cities " – a symbolic name for Jerusalem) and then creates a logo to represent it. A reward is usually awarded to the best logo. They also have wall journals, sport matches and other educational and cultural activities and contests.

31 Although the question was about formal sources, about 4% of the students still thought such information ought to be provided through informal sources, indicating that perhaps the respondents did not fully understand the question or that they still felt the need for such type of sources.

32 "Other academic fields ", which accounted for less than 4% of the students' responses, had to be overlooked as they were not included in the given list of fields offered at the community colleges.

33 Marianne Heiberg. "Opinions and Attitudes", in Marianne Heiberg and Geir Ovensen, FAFO-report 151, 1993, p.249

34 Linda J. Nicholson. "Women and Education" in *The Education Feminism Reader*, edited by

Lynda Stone, 1994, p.74.

35 Marianne Heiberg, " Education ", *Palestinian Society in Gaza, West Bank, and Arab Jerusalem: A Survey of Living Conditions*, edited by Heiberg and Ovensen. FAFO-report 151, 1994.

36 *Ibid.*, p. 149

37 A few examples of selected years would clarify the conclusion made here. In 1987, of those who attained 13-15 years of education, employed males formed 54% and females formed 30%; for the year 1990 the ratio was 71% males to 35% females; and for the year 1993, the ratio was 64% males to 29% females. Of those who attained 16 years of education or more, the ratios for males and females participating in the labor force for the same years were: in 1987, 64% males to 45% females, in 1990, 82% males to 47% females, and in 1993, 85% males to 46% females. "Labor Force in West Bank" in *PCBS Current Status Report Series #3*, (Based on Israeli Statistics) May 1995, p.88.

38 op cit., p.202

39 Hammami in the FAFO report examined women's perception of the appropriateness of working roles for women; she found that what was important to them was the kind of work outside the house. She reported that the largest majority of women (86%) preferred professional jobs for their daughters. (*Ibid.*, p. 305)

40 PNA Ministry of Education and Higher Education. "Towards a Vocational and Technical System in Palestine. " General Directorate for Technical Education and Community Colleges, July 1995, p. 7.

41 UNESCO. "Higher Education in the West Bank and the Gaza Strip". Report of a UNESCO Mission on Higher Education to the West [Bank and Gaza Strip (4-14 January 1994), p. 17.

42 *Ibid.*, p. 17.

43 The World Bank. "Developing the Occupied Territories: An Investment in Peace," vol. 6, *Human Resources and Social Policy*, Sept. 1993, p. 43.

44 Marianne Heiberg, "Education", *Palestinian Society in Gaza, West Bank, and Arab Jerusalem: A Survey of Living Conditions*, edited by Heiberg and Ovensen. FAFO-report 151, 1994, p. 144.

45 Due to the wide distribution of students' responses over 67 areas, the percentages obtained were too small to comment on. Therefore, we saw that categorizing students' answers into three major categories, based on the percentages the different fields accounted for, would make the commentary more meaningful. Each group included the top five fields.

46 Commerce includes business administration, accounting, management, and economics. In the Palestinian context, these sub-areas, except for economics, are offered at various universities and at almost all community colleges. Admission rules and regulations at these institutions allow students from either stream, science or arts, to specialize in them.

47 The interview with the Dean of Khadoury, the Palestine Technical College at Khadoury, was carried out in September, 1995.

48 The percentage reported here was calculated on the basis of statistics, published by the PCBS the total number of students in grade 10 and the distribution of this total into science and arts and vocational stream in grade 11 for the consecutive year. PNA Palestinian Central Bureau of Statistics, Education Statistics, 1995-1996.

49 PNA Ministry of Education and Higher Education.

50 PNA Ministry of Education and Higher Education.

51 We say "he" here because female students have minimal access to vocational or industrial schools; see "VETT Provisions" in Section V (A) in Part one of this study.

52 Information based on an interview with Mr J. Zakarneh at the MEHE, May 1996.

53 *Ibid.*, May 1996.Gender bias is obvious at least in the vocational streams, which give three opportunities for male students explicitly stated as agricultural, industrial and commercial,

while only one, undefined type of vocational school is suggested for females.

54 See Table 1 in Appendix 1.

55 The term "core" subjects is used here to refer to those subjects that are basic and are taught to all students, such as mathematics, biology, religion, and languages; they are treated as essential and are thus given most attention. The term "marginal" subjects, however, is used here to refer to those subjects which are considered less important than core subjects: they are taught by unqualified or unspecialized teachers, and they are given less weight in terms of time,(one or two hours per week); grade distribution of "marginal" subjects, which are given 100 points compared to 200 or 300 points for languages or science subjects, indicate the kind of differences existing in curricula.

56 "Study plans" are official documents issued by the Ministry of Education and Higher Education which list the subjects to be taught to each class in each level and the number of hours allotted for each subject, per day or per week.

57 PNA Ministry of Education and Higher Education. "Study Plan for the Basic and Secondary Cycles for the Year 1995-1996", pp. 6-7

58 *Ibid.*, p.7

59 PNA Ministry of Education and Higher Education. "Study plan for the basic and secondary cycles for the year 1995-1996", pp. 9-10

60 PNA Ministry of Education and Higher Education. "Married Female Students", a memo from the General Director of Education in Ramallah district, #18/100/3088, 11/21/1995.

61 PNA Ministry of Education and Higher Education. "Unified School Uniform for Females", a memo from the General Director of Education in Ramallah district, #74/91/223, 01/28/1996.

Conclusion and Policy Recommendations

This study was conducted to examine Vocational Education and Technical Training (VETT) in Palestine from the perspective of gender planning and gender integration. It is an attempt to find out how responsive the system of VETT is to its potential beneficiaries with a focus on its role in shaping gender perceptions and perpetuating or changing existing gender roles and patterns. Like all other Palestinian institutions and systems, VETT has been undergoing transition. Before August 1994, when the Palestine National Authority (PNA) Ministry of Education and Higher Education took control over the education system, VETT was controlled by several bodies: the Israeli occupation authorities, the Jordanian Ministry of Education, the UNRWA, and the private sector. The current study was conducted during this transitional phase when PNA policy makers were engaged in assessing the status of VETT and identifying its priorities. Thus this study is an attempt to yield gender aware research that can contribute to improved policy formulation and planning, as well as the eventual development of a more equitable VETT system.

The study falls into two parts: Part I looks at the system of VETT in Palestine from a gender perspective taking the gender planning and gender integration approach. It is an attempt to see to what extent gender institutionalization is implemented in four spheres : the political sphere, the organizational sphere, the technical sphere and the research sphere. The discussion and analysis are based on secondary sources as well as on semi-structured interviews with key personnel in VETT. Part II focuses on the technical sphere taking a student-centered approach. It specifically examines the knowledge, attitudes, perceptions and expectations of a potential VETT target group, 854 12th graders in the public schools. It attempts to uncover how the family and the education system affect and possibly determine students' life and future opportunities, and to what extent the opportunities available to these students are in line with existing gender roles and gender patterns. The discussion and analysis were based on the findings from a set of questionnaires, distributed to 854 twelfth graders in public schools in urban and rural areas of three different regions in the West Bank- the north, the center and the south.

The findings in Part I indicate that VETT in Palestine is neither efficient nor relevant to the needs of its target group or the needs of the market. On the political and organizational levels, VETT is institutionally fragmented and incapable of serving its stated purposes. Not only is it gender insensitive, but it also perpetuates gender bias. For the most part, research on VETT is not gender informed; a few studies and policy documents recognize its gender inequity, but when recommendations and policies for reform are formulated, they do not adequately consider gender. Review of literature on VETT also showed that VETT institutions often do not go in line with their stated policies, where a clear dissociation between policies and stated objectives and practices are noted.

The findings in Part II reveal that

1. students' knowledge of VETT's provisions and opportunities is very limited and basically derived from informal private sources. The knowledge, attitudes and perceptions of students coincide with existing gender roles and gender practices. Family and education structures reinforce the dichotomy between private and public worlds: females are channelled to the private world, where their role is limited to reproduction and caretaking; males are channelled to the public world, where their role is defined to be production and breadwinning. Having internalized social norms and values, male and female students confine themselves to these spaces: females show less awareness of available opportunities and perceive narrower education and employment opportunities.
2. Through streaming, the education system predetermines and restricts future opportunities for both males and females alike. Students in the arts stream, those usually perceived by the system to be academically and intellectually inferior to students in science, are more ghettoized: they show poorer academic achievement and a lower level of motivation; they have more restricted knowledge of VETT and fewer education and employment opportunities than students in the science stream.
3. Regional differences showed that the south is deprived of privileges that the north and the center enjoy. Due to mal-distribution of wealth and resources, most institutions, donor funds and national activities are concentrated in the center; as a result of the recent political changes, the south has become physically dissociated from the center and the north.

Relating the findings of the two parts of the study, we conclude that the system of VETT in Palestine does not adequately function to meet the needs and expectations of its target group or help them promote positive attitudes towards its current provisions. As it currently stands, it is unable to change their expectations and perceptions. On the educational level VETT is not considered higher education; it is not perceived as a useful type of education that would give students good work opportunities or social prestige; and it is seen as an institution providing educational opportunities for students with poor achievement and performance. Students' knowledge of VETT provisions and their attitudes towards the fields of specialization it provides reveal conventional perceptions of gender roles and gender relations. Thus, rather than opening up new opportunities and roles for male and female students, VETT simply reproduces gender dichotomies and gender hierarchies present in the family, the education system and other social institutions. In addition, VETT in Palestine is not compatible with modern day life and market conditions and needs, and thus, it is currently inadequate for economic and social development.

To reform Palestinian VETT and make it able to contribute to economic and social development, we see that the most urgent step forward is to conduct VETT systems and market analysis with the perspective of economic development and human resource development that integrates gender and that is relevant to today's needs, and with a clear

perception of where Palestine fits within the international world order. A second, but equally important, issue is to design policies that would take into consideration streaming (arts and science streams), region and gender; effective reform polices that would yield improved VETT output ought to take into consideration inequity, and the new role of women in society and their integration into social and economic development.

Policy Recommendations

At this time of tremendous transition in Palestinian society, many Palestinian educators, government officials and institutions are currently engaged in educational policy and curriculum reform. Such a multi-faceted initiative is required to confront the complex and interrelated issues facing Palestinian education after decades of occupation and stagnation. The policy recommendations offered here aim to contribute to this initiative, while addressing only the specific issues uncovered in this study.

1. The study found that streaming, in terms of access to curriculum, is a major factor limiting students' opportunities and knowledge, especially isolating arts students, and females in particular. This finding is congruent with a widespread discontent among educators about the educational philosophy of streaming. Arditzoglou's study showed how grade 10 female Palestinian students' access to and achievement in mathematics, life sciences and general science (which includes physics and chemistry) was directly related to the under-representation of Palestinian female students in the science stream as these students reached grade 11. It is thus recommended that the policy of streaming undergoes a critique and evaluation. Abolition of streaming is one option to be considered seriously: if this proves unfeasible, practical access to the curriculum through streaming must be improved so that it eliminates discrimination of arts and female students.
2. Coordination and communication between program providers in the organizational sphere and beneficiaries in the technical sphere was shown to be extremely weak, resulting in students' lack of access to knowledge and information on VETT. It is recommend that VETT reach out and take proactive measures to reach its target population, bearing in mind that different avenues may have to be developed to reach female and male students, as our study shows that more females than males derive their information from informal sources. Funds should be identified to promote student advising and advertising of VETT provisions in appropriate media and fora. The lack of communication and coordination between program providers and policy-makers in the political sphere must also be addressed, particularly as the historical circumstances have changed, and Palestinian educational authority can not unify and coordinate VETT.
3. The concept of VETT as a lower-rank and undesirable form of education must be changed to a concept of VETT as higher education and an avenue to meaningful employment and economic participation. This is particularly relevant for upgrading

the perceptions and capabilities of women, as our study showed that women are the majority of the student population at community colleges, due to male preference and opportunity for higher status university education.

4. The study has shown a gap between theory and practice in the access of female students to secondary school. Observed practices at mixed schools revealed female student isolation an a discouraging environment for learning, which obstructs the continuance of education. Co-educational schools alone are not a solution, unless accompanied by changes in policy, teacher awareness and pedagogical practices. A similar gap exists at the community college level, in terms of access to fields of specialization: the theoretical access is contradicted in practice, where, if not actively discouraged, females (and males as well) are not encouraged to enter fields that do not conform to their gender roles.
5. A clear finding of the study was that the research sphere is not gender-informed. While there may be admission, and even concern, over women's lack of opportunities, it is not reflected in policy recommendations or in policy research recommended or undertaken. This was obvious in the review of Hashweh's and Tull's two important studies. Real educational reform requires further systematic and gender-informed research. One clear example is the statistical problem of female drop-out rates, discussed in the study, ,where further study of female drop-outs in the transition between grade 9/10 and 11 is required..
6. While the Palestinian Ministry of Education's new regulation allowed married students to complete secondary school is positive, additional initiative should be taken, particularly with school administrators and teachers, to positively encourage these students to continue. On a different level, the women's movement demand to raise the age of marriage is highly relevant here.

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Appendix 1

Table 1. Distribution of post-preparatory vocational schools (leading to the Tawjihi) in Palestine.
Source: Information displayed in this table is borrowed from Maswada and Al-Kek, 1994.

#	School	Date	Location	Run-By	Gender	Duration	Fields
1	Dar Al-Aytam Industrial School	1922	West Bank	Al-Awqaf	Male	3 years	Vocational Industrial
2	Lutheran Industrial School	1948	West Bank	Lutheran Church	Male	3 years	Vocational Industrial
3	Abdallah-ibin Al-Husayn School	1960	West Bank	Israeli CIVAD	Male	2 years	Vocational Industrial
4	Nablus Industrial School	1961	West Bank	Israeli CIVAD	Male	2 years	Vocational Industrial
5	Celisian Industrial School	1963	West Bank	Celisian Brothers	Male	3 years	Vocational Industrial
6	Al-Yatim Al-Arabi	1965	West Bank	Al-Yatim Al-Arabi Society	Male	3 years	Vocational Industrial
7	Toulkarem Industrial School	1976	West Bank	Israeli CIVAD	Male	2 years	Vocational Industrial
8	Deir Dibwan Industrial School	1978	West Bank	Israeli CIVAD	Male	2 years	Vocational Industrial
9	Seelat Al-Thahriya Industrial School	1992	West Bank	Israeli CIVAD	Male	2 years	Vocational Industrial
10	Hebron Industrial School	1993	West Bank	Israeli CIVAD	Male	2 years	Vocational Industrial
11	Al-Mamouniyya School	1938	West Bank	Israeli CIVAD	Female	3 years	Commerce Sewing
12	Al-Amal School	1961	West Bank	Al-Amal Society	Co-Ed	3 years	Commerce
13	Al-Arroub Agricultural	1930	West Bank	Israeli CIVAD	Male	3 years	Agricultural
14	Beit Hanoun Secondary	1960	Gaza	Israeli CIVAD	Male	3 years	Agricultural

Table 2. Distribution of VTCs for drop-outs in Palestine
Source: Information based on data borrowed from Hashweh, 1994.

Name of VTC &/or Directors	Date of Establishment	Gender	Areas of Specialization	No	Duration of Study
CIVAD VTC WB and GS	1968-1970	Male	Construction Masonary Services	1 1 16	5-11 months
Total		**Male**	**3**	**18**	
CIVAD VTC WB and GS	1986-1970	Male Male Male Female?	Garage Licensing Mechanics for Garage Driving School	1 1 1	360 hours 350 hours 30 hours
Total		**Male**	**3**	**3**	
CIVAD VTC WB and GS	1986-1970	Male & Female	Hebrew language Hairdressing Sewing Typing / Accounting & Computer	1 1 1 1	250 hours 6 months 6 months 9-11 months
Total		**M&F**	**4**	**4**	
CIVAD VTC	1986-1970	Male	Radio and TV	1	14-18 months
Total		**Male**	**1**	**1**	
Total		**Male Female**	**11**	**26 6**	
Al-Bir Society WB	1952	Male	Vocational Training Agricultural Training	4 1	3 years
UNRWA Kalandia	1953	Male	Vocational Training	10	
Al-Mashrou Al-Arabi YMCA	1948	Male	Carpentry Agricultural Training		3 years Grade 6-9
Al-Mashrou Al-Arabi YMCA	1950	Male	Carpentry & Agriculture		
UNRWA Gaza VTC	1954	Male	Services Construction Teaching Methods & Psychology	11	2 years
Palestine Institute for VT (Private) WB	1992	Mixed (M&F)	Shoe Design Office Secretary Office Management Printed & TV Ads		2400 hours 458 hours 400 hours 2400 hours
NECC VTC	1958	Male & Female	Vocational Tainting	5	3 years

VTC: Vocational Training Center
NECC: Near East Council of Churches
WB: West Bank
GS: Gaza Strip

Table 3. Distribution of community colleges (VTCs at the post-secondary level) in Palestine
Source: Data displayed in this table is borrowed from Maswada and al-Kek, 1990.

#	Community College West Bank	Date	Run-By	Gender	Area of Speicialization	
					Teaching	Vocational
1	Polytechnic College	1975	University Graduate Association	Co-Ed	---	15 areas
2	Al-Ibrahimiyah College	1983	Private	Co-Ed	4 areas	4 areas
3	Al-Ummah College	1983	Al-Awqaf	Co-Ed	3 areas	3 areas
4	Al-Asriyah College	1983	Private	Co-Ed	2 areas	12 areas
5	Al-Najah Community College	1965	Private	Co-Ed	3 areas	7 areas
6	Al-Rawdah Community College	1970	Private	Co-Ed	3 areas	8 areas
7	Qaiqilia Islamic Studies College	1980	Al-Awqaf	Co-Ed	1 area	---
8	Bethlehem College for Bible Studies	1978	Christian Sector	Co-Ed	1 area	---
9	Kalandia Training Center	1953	UNRWA	M	---	4 areas
10	Al-Arroub College	1958	CIVAD[1]	M	3 areas	---
11	Ramallah Men's College	1965	UNRWA	M	6 areas	4 areas
12	Jerusalem Islamic Studies College	1978	Al-Awqaf	Co-Ed	1 area	1 area
13	Khadoury College	1920	CIVAD	M	7 areas	2 areas
14	Ramallah Women's Training Center (RWTC)	1962	UNRWA	F	6 areas	10 areas
15	Ramallah Women's Center	1952	CIVAD	F	7 areas	---
	Gaza Strip[2]					
16	Men's Teacher Training Center	1964	CIVAD	M	6 areas	---
17	Women's Teacher Training Center	1964	CIVAD	F	6 areas	---

[1] The Colleges run by the CIVAD throughout the past twenty five years of Israeli Occupation are public colleges that were handed over to the Palestinian Authority in August 1994 and have been run by it since then.

[2] The two teacher training centers in the Gaza Strip shown in the table above are not presently in operation. Instead two other VTCs are running; these are Gaza Training College and the Polytechnic in Khan Younis.

Table. 4.0. Symbols and names of community colleges shown in Tables 4.1 and 4.2.

Symbol	Name of Community College
A	Al-Arroub College
B	Bethlehem Bible Studies
C	Polytechnic (Hebron)
D	Al-Asriyah Community College
E	Al-Ummah College
F	Al-Ibrahimiyah College
G	Islamic Studies College (Jerusalem)
H	Ramallah Women's Teacher Training Center
I	Ramallah Women's Training Center (RWTC)
J	Ramallah Men's Teacher Training Center
K	Kalandia Training Center
L	Islamic Studies College (Qalqilia)
M	Al-Rawdah Community College
N	Al-Najah Community College
O	Khadoury College
P	Men's Teacher Training (Gaza)[1]
Q	Women's Teacher Training (Gaza)

[1] The areas of specialization in the teacher training centers in Gaza are not shown here because the data on this matter is general and cannot be classified in the same way it was classified for the other colleges in the West Bank. In the two centers in Gaza, students are admitted to the arts stream or the science stream.

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Table 4 .1 Distribution of areas of specialization in community colleges in Palestine.
Source: Data displayed here is based on information borrowed from Maswada and Al-Kek, 1990.

#	Technical/Semi-professional Fields	Community Colleges									
		C	D	E	F	I	J	K	M	N	O
1	Banking and Finance				x					x	
2	Business Administration		x		x		x		x	x	
3	Accounting		x	x	x				x	x	
4	Computer Programming	x	x	x	x					x	
5	Office Secretary /Management			x		x	x		x	x	x
6	Computer Skills		x	x	x	x			x		
7	Physio-therapy					x					
8	Lab Analysis					x					
9	Lab Technician		x						x		
10	Health Supervision		x								
11	Assistant Pharmacist		x						x		
12	Agricultural Production										x
13	Media and Journalism		x								
14	Law		x								
15	Hotel Management		x								
16	Hairdressing and Beauty Care					x					
17	Sewing / Dressmaking					x					
18	Nutrition					x					
19	Home Economics					x					
20	Ceramics and Fine Arts	x									
21	Engineering	x									
22	Quantity & Specification							x			
23	Building & Construction	x	x					x			
24	Land Surveying	x	x					x			
25	Architectural Drawing	x						x	x		
26	Architecture	x						x			
27	Interior Design/Decoration	x	x						x		
28	Roads & Transportation	x									
29	Mechanical Engineering	x									
30	Electronical Engineering	x									
31	Communications	x									
32	Electric Wiring	x									
33	Agricultural Mechanics	x									

Table 4.2. Distribution of teacher training and academic programs at community colleges in Palestine.
Source: Data displayed here is based on information borrowed from Maswada and Al-Kek, 1990.

#	Teacher Training / Academic Programs	A	B	D	E	F	G	H	I	J	L	M	N	O
34	Arabic	x			x	x		x	x	x		x	x	x
35	English	x		x	x	x		x	x	x		x	x	x
36	Elementary Education			x	x	x			x	x		x	x	
37	Social Sciences	x				x		x	x					x
38	Science							x	x	x				x
39	Mathematics							x	x	x				x
40	Physical Education							x						x
41	Child Education (Nurseries)								x					
42	Religion / (Islamic Education)							x			x			x
43	Sharia						x				x			
44	Bible Studies		x											
45	Wath wa Imama						x							
46	Library Science												x	
47	Home Economics							x						

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Table 4.3 Distribution of training programs in the community colleges in Palestine for the year 1994-1995[1].

#	Community College / Center Name	Academic / Education Programs	Engineering Programs	Para-Medical Programs	Administration & Finance Programs	Applied Arts	Secretarial Computer	Agricultural Programs	Social Work
1	Polytechnic (Hebron)	—	x	—	—	x	x	—	—
2	Al-Ibrahimiyah	x	—	—	x	—	x	—	—
3	Al-Ummah College	x	—	—	—	—	—	—	—
4	Al-Aariyah College	x	—	x	x	—	x	—	x
5	Al-Najah College	x	x	x	x	—	x	—	—
6	Al-Rawdah College	x	—	x	x	—	x	—	—
7	Islamic Studies College (Qalqilia)	x	—	—	—	—	—	—	—
8	Bethlehem Bible Studies College	x	—	—	—	—	—	—	—
9	Kalandia Center	—	x	—	—	—	—		—
10	Al-Arroub College	x	—	—	—	—	—	—	—
11	Men's Teacher Training Center	x	—	—	x	—	x	—	—
12	Islamic Studies College (Jerusalem)	x	—	—	—	—	—	—	x
13	Khadoury College	x	x	—	—	x	x	x	—
14	Ramallah Women's Center	x	—	—	—	—	—	—	—
15	RWTC	x	x	x	x	x	x	—	x
16	Polytechnic (Khan Younis)	x	x	x	x	—	x	—	—
17	Gaza Training Center	x	x	x	x	—	—	—	—

[1] Data presented here is obtained from the Palestinian Central Bureau of Statistics, October 1995, through an official request. No reference was made to this data at this stage of the study; it is presented here just for comparative purposes.

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Table 5: Distribution of students in community colleges in Palestine for the year 1990.[1]

College	Education / Teaching		Academic[2]		Engineering		Paramedical[3]		Administrative Finance[4]		Applied Arts[5]		Computer		Agriculture		Media Law		Hotel Management	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Polytechnic (Hebron)	-	-	-	-	639	31	-	-	-	-	36	31	120	49	45	-	-	-	-	-
Al-Ibrahimiyah	63	166	-	-	-	-	-	-	126	33	-	-	33	20	-	-	-	-	-	-
Al-Ummah	23	220	-	-	-	–	-	-	52	55	-	-	13	29	-	-	-	-	-	-
Al-Asriyah	122	132	-	-	17	2	149	12	93	4	-	-	42	2	-	-	22 /4	–	20	-
Al-Najah	36	209	30	50	-	-	149	12	118	95	-	-	39	25	-	-	-	-	-	-
Al-Rawdah	-	140	-	-	42	8	58	62	155	205	-	-	30	30	-	-	-	-	-	-
Islamic Studies (Qalqilia)	64	161	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bethlehem Bible Study	-	-	9	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kalandia	-	-	-	-	119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Al-Arroub	81	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-
Ramallah Men's College	237	-	-	-	-	-	88	-	-	-	-	-	-	-		-	-	-	-	-
Islamic Studies Jerusalem	-	-	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Khadoury	360	-	-	-	-	-	-	-	-	-	-	-	22	-	34	-	-	-	-	
RWTC	-	303	-	-	-	-	-	103	-	80	-	117	-	-	-	-	-	-	-	-
Ramallah Women's	-	239	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gaza Women's	-	440	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gaza Men's	320	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1306	2010	94	56	860	41	295	177	544	472	36	148	299	155	79	-	26	-	20	-

[1] Figures displayed in this table are borrowed from Maswada and Al-Kek, 1990. However, for the purpose of the study undertaken here, the figures were recalculated and reorganized.

[2] Academic areas include library science and documentation, Bible studies, *Islamic Sharia, and Imama and Wath.*

[3] Paramedical programs, here, include nutrition and house management offered at RWTC, where the majority of women enrolled in paramedical programs specialize in this area.

[4] Administrative and Finance includes accounting, secretarial and office work, banking and finance. Though the table shows a high enrollment rate for women, the majority of them are in secretarial and office work.

[5] Applied Arts includes arts of ceramics, dressmaking, hairdressing and beauty care.

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Table 6 : Distribution of students in community colleges in Palestine for the year 1994-1995.[1]

Community College	Academic		Education/ Teaching		Engineering		Paramedical		Administrative Finance		Applied Arts		Computer		Social Work	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Polytechnic (Hebron)	-	-	-	-	239	10	-	-	-	-	97	83	43	73	-	-
Al-Ibrahimiyah	3	11	-	63	-	-	-	-	6	4	-	-	-	-	-	-
Al-Ummah	14	161	-	-	-	-	-	-	32	74	-	-	13	38	-	-
Al-Asriyah	8	20	-	-	-	-	26	16	-	-	-	-	13	3	4	4
Al-Najah	3	51	1	5	29	3	3	11	188	216	-	-	64	60	23	-
Al-Rawdah	3	31	-	11	-	-	91	52	45	34	-	-	20	18	-	-
Islamic Studies (Qalqilia)	-	39	-	39	-	-	-	-	-	-	-	-	-	-	23	-
Bethlehem Bible Study	-	-	24	18	-	-	-	-	-	-	-	-	-	-	-	-
Kalandia	-	-	-	-	51	-	-	-	-	-	-	-	-	-	-	-
Al-Arroub	47	-	43	-	-	-	-	-	-	-	-	-		-	-	-
Ramallah Men's College	-	-	-	-	-	-	-	-	95	-	-	-	23	-	-	-
Islamic Studies (Jerusalem)	-	54	-	-	-	-	-	-	-	-	-	-	-	-	31	-
Khadoury	-	-	-	-	37	-	-	-	13	6	11	10	9	3	-	-
RWTC	-	-	-	-	-	-	-	125	-	40	-	128	-	28	-	47
Ramallah Women's	-	118	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gaza Training College	-	-	-	-	64	-	20	-	24	24	-	-	-	-	-	-
Polytechnic Khan Younis	6	-	-	-	83	3	84	53	143	72	100	50	-	-	-	-
Total	84	692	68	172	503	29	224	293	546	490	108	221	285	273	58	64

[1] The data displayed in the table is borrowed from the statistics prepared by the Palestinian Central Bureau of Statistics, Ministry of Education and Higher Education for, to be published in *Education Statistical Yearbook*, 1994/1995. It was obtained through an official request. No reference was made to this data in the body of the paper; it is provided here for comparative purposes.

Table 7. Distribution of teachers, administrators and services staff in Palestine for the year 1990.[1]

Community College	Teachers M	F	Total T	Administrators M	F	Total A	Services Staff M	F	Total SS	General Total
Co-ed Colleges										
Polytechnic (Hebron)	185	10	195	75	10	85	46	0	46	326
Al-Ibrahimiyah	26	3	29	11	1	12	11	1	12	53
Al-Ummah	16	0	16	5	4	9	5	0	5	30
Al-Asriyah	53	16	69	18	17	35	10	2	12	116
Al-Najah	23	6	29	4	2	6	0	0	0	35
Al-Rawdah	45	5	50	10	5	15	8	1	9	74
Bethlehem Bible Studies	12	0	12	5	0	5	0	1	1	18
TOTAL	360	40	400	128	39	167	80	5	85	652
Women's Colleges	M	F	Total	M	F	Total	M	F	Total	Gen. Tot.
Islamic Studies (Qalqilia)	6	0	6	6	0	6	7	0	7	19
RWTC	16	42	58	6	21	27	25	14	39	124
Gaza Women's	12	10	22	1	2	3	1	1	2	27
Ramallah Women's	6	10	16	0	9	9	5	8	13	38
TOTAL	40	62	102	13	32	45	38	23	61	208
Men's Colleges	M	F	Total	M	F	Total	M	F	Total	Gen. Tot.
Ramallah Men's	21	3	24	14	2	16	21	0	21	61
Al-Arroub	7	0	7	6	0	6	28	0	28	41
Khadoury	25	1	26	17	1	18	36	0	36	80
Islamic Studies (Jerusalem)	9	0	9	4	0	4	5	1	6	19
Gaza Men's	15	0	15	3	0	3	4	0	4	22
Kalandia	24	0	24	13	2	15	29	1	30	69
TOTAL	101	4	105	57	5	62	123	2	126	292
General Total	501	106	607	198	76	274	241	30	271	1152

[1] Data displayed in this table is based on statistical information borrowed from Maswada and Al-Kek, 1990. For the purpose of data disaggregation undertaken in this study, this information was recalculated and reorganized.

Table 8: Distribution of Employees at Community Colleges in the West Bank and Gaza Strip by Gender, Academic Degree Held and Type of Post Held for the year 1990.

Academic Degree	Teachers M	F	Total	Administrators M	F	Total	Services Staff M	F	Total
Ph.D.	20	2	22	4	0	4	24		26
MA	110	11	121	16	1	17	126	12	138
High Diploma	20	1	21	5	0	5	25	1	26
BA	287	68	355	77	18	95	364	86	450
Post-Secondary Diploma	64	18	82	48	38	86	112	56	168
Secondary Education	0	4	4	42	13	55	42	17	59
Below Secondary Education	0	2	2	6	6	12	6	8	14
Total	501	106	607	198	76	274	699	182	881

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Appendix 2

Table 1 [1]
Distribution of Study Population by Region
(Numbers and Percentages of Sex, Stream and Locale Categories)

REGION	SEX		STREAM		LOCALE	
	Males	Females	Arts	Science	Rural	Urban
North (Nablus)	996 52%	927 48%	1242 65%	681 35%	729 38%	1196 62%
Ramallah	1083 48%	1178 52%	1706 75%	555 25%	1159 51%	1102 49%
Jerusalem	163 24%	507 76%	411 61%	259 39%	48 07%	622 93%
Center	1246 43%	1685 57%	2117 72%	814 28%	1207 41%	1724 59%
South (Hebron)	1821 51%	1744 49%	2458 69%	1107 31%	1550 43%	2015 57%
Total	4063 48%	4356 52%	5817 69%	2602 31%	3484 41%	4935 59%
Grand Total	8419		8419		8419	

[1] Table 1 shows the distribution of students in three regions from which the sample for the survey was drawn; the figures were obtained in August 1995 from a list of all rural and urban secondary schools prepared by the Planning Office at the Ministry of Education and Higher Education . The category "locale" does not show camp students because there are no secondary public schools in the refugee camps of the West Bank in Palestine.

Table 2
Distribution of High School Study Population by Gender
(Numbers and Percentages of Sex Category)

REGION	Male students		Female Students		Total Number
	Number	Percent	Number	Percent	
Nablus	996	52%	927	48%	1923
Ramallah	1083	48%	1178	52%	2261
Jerusalem	163	24%	507	76%	670
Both	1246	43%	1685	57%	2931
Hebron	1821	51%	1744	49%	3565
Total	4063	48.2%	4356	51.7%	8419

Table 3
Distribution of High School Study Population by Region
(Numbers and Percentages of Stream Category)

REGION	Arts Students		Science Students		Total Number
	Number	Percent	Number	Percent	
Nablus	1242	64.5%	681	35.5%	1923
Ramallah	1706	75%	555	25%	2261
Jerusalem	411	61%	259	39%	670
Both	2117	72%	814	28%	2931
Hebron	2458	69%	1107	31%	3565
Total	5807	69%	2602	31%	8419

Table 4
Distribution of High School Study Population by Region
(Numbers and Percentages of Locale Category)

REGION	Urban Students		Rural Students		Total Number
	Number	Percent	Number	Percent	
Nablus	1196	62%	727	38%	1923
Ramallah	1102	49%	1159	51%	2261
Jerusalem	622	93%	48	7%	670
Both	1724	58.8%	1207	41.2%	2931
Hebron	2015	56.5	1550	43.5%	3565
Total	4935	58.6%	3484	41.4%	8419

Table 5
Distribution of Sample Population by Region
(Numbers and Percentages of Students, Subjects Needed, Actual Subjects)

REGION	Students Enrolled		Number of Subjects	
	Number	Percent	Needed	Responded
Nablus	1923	22.8%	192	188
Ramallah	2261	(77%)	(226)	(234)
Jerusalem	670	(23%)	(67)	(77)
Both	2931	34.8%	293	342
Hebron	3565	42.4%	355	355
Total	8419	100%	840	854

Table 6

Students' Gender Classification of 40 Fields of Specialization
Percentages of Female / Male Responses[2]

Profession	Responses of Sexes						Significance of Differences
	Female Answer			Male Answer			
	MP	FP	BP	MP	FP	BP	
Physiotherapy	33	14	48	26	12	58	Chi-Square =7.50319, p=.02348
Pharmacy	19	9	71	10	5	84	Chi-Square =18.71357,p=.00009
Medical Secretary	12	42	41	12	31	54	Chi-Square =14.66595,p=.00065
Accounting & Bus Ad	55	6	37	31	6	61	Chi-Square =51.03909,p=.00000
General Secretary	18	35	44	18	27	52	Chi-Square =7.19399,p=.02741
Hotel Catering	52	18	26	53	12	32	Chi-Square =5087360,p=.05304
Social Work	21	23	48	13	35	48	Chi-Square =16.99974,p=.00020
Imam & Watch	49	8	37	27	11	55	Chi-Square =43.53894,p=.00000
Legal Services	56	2	38	48	3	47	Chi-Square =6.07473,p=.04796
Qur'anic	46	2	49	20	4	74	Chi-Square =69.15256,p=.00000
Surveying	86	2	10	89	0.5	8	Chi-Square =5076705,p=.05594
Electric Connection	92	2	3	96	0	3	Chi-Square =10.05914,p=.00654
Mechanical Drawing	70	2	22	77	0.7	16	Chi-Square =7.77392,p=.02051
Architect. Drawing	46	3	48	38	3	56	Chi-Square =5.89905,p=.05236
Food Production	46	11	40	40	10	48	Chi-Square =6.07467,p=.04769
Radio & TV Main.	86	3	9	83	1	15	Chi-Square =10.65302,p=.00486

[2] MP= Male Profession, FP= Female Profession, BP= Profession for both females and males.

Table 6 (Continued.)

Students' Gender Classification of 40 Fields of Specialization
Total Percentages of Female / Male Responses

Profession	Responses of Sexes						Significance of Differences
	Female Answer			Male Answer			
	MP	FP	BP	MP	FP	BP	
Library Resources	19	10	66	14	7	76	Chi-Square =8033450,p=.01549
Shari'a	22	6	70	6	11	83	Chi-Square =52.44969,p=.00000
Nutrition	10	56	31	4	66	28	Chi-Square =14.06021,p=.00088
Child Education	6	56	36	1	71	27	Chi-Square =23.65282,p=.00001
Vocational Education	34	19	41	6	53	38	Chi-Square=143.52400,p=.00000
Physical Education	50	8	40	11	17	72	Chi-Square=157.33692,p=.00000
Fine Arts	9	47	40	3	55	41	Chi-Square =12.45151,p=.00198
Interior Decoration	32	25	39	15	32	50	Chi-Square=33.753775,p=.00000
Radio & TV Technician	76	5	13	69	6	22	Chi-Square =10.00836,p=.00671
Computer	11	4	83	5	5	87	Chi-Square =9.09392,p=.01060
Health Inspection	33	15	46	39	11	45	Not Significant
Laboratory Analysis	18	10	69	13	9	76	Not Significant
Medical Equipment Maintenance	50	3	39	58	2	34	Not Significant
Nursing	4	36	58	4	39	57	Not Significant
Banking & Finance	58	3	32	55	3	36	Not Significant
Hotel Management	57	11	23	55	7	26	Not Significant
Landscaping	81	2	13	80	1	17	Not Significant
Auto Mechanics	93	2	4	92	0.7	6	Not Significant
Air-Conditioning & Heating	83	3	9	82	2	10	Not Significant
Dressmaking	5	51	41	3	54	43	Not Significant
Agricultural Production	32	25	39	15	32	50	Not Significant
Agricultural Mechanics	77	2	12	75	1	13	Not Significant

The Palestinian Women's Research and Training Programme

The Programme was initiated in 1993 by WUS(UK) to develop training in policy oriented research on women's issues, gender, and organisational management. The overall goal of the programme has been to improve the status of Palestinian women in the West Bank and Gaza Strip through providing intensive training and follow-up to women from over 20 Palestinian NGOs. This paper is the result of a major component of the programme, the training and supervision of a group of researchers to conduct in-depth policy oriented research on women's issues. The overall aim has been to strengthen capacity to undertake gender aware policy research to ensure that the needs of Palestinian women as well as men are represented in the policy dialogues and agendas of future policy in the region. This research paper is one of a series of four research projects on key gender issues facing women in Palestine and the Occupied Territories today. The programme was coordinated by the Women's Studies Centre (West Bank) and the Women's Affairs Centre (Gaza Strip).

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